10¢ A COPY

The OIL WEEKLY

April 30, 1926 Volume 41. No. 6

Once a driller uses Harrisburg Forged Seamless Steel Couplings he keeps on using them

The man who has "tried 'em all" is through changing couplings when he strikes one that stands the hardest kind of work with no "back talk."

That's Harrisburg—the coupling without a weld or weakness. Forged Seamless from Special Double Strength Oil Field Steel; tapered and threaded to insure accurate stabbing and a tight seal without crushing the pipe.

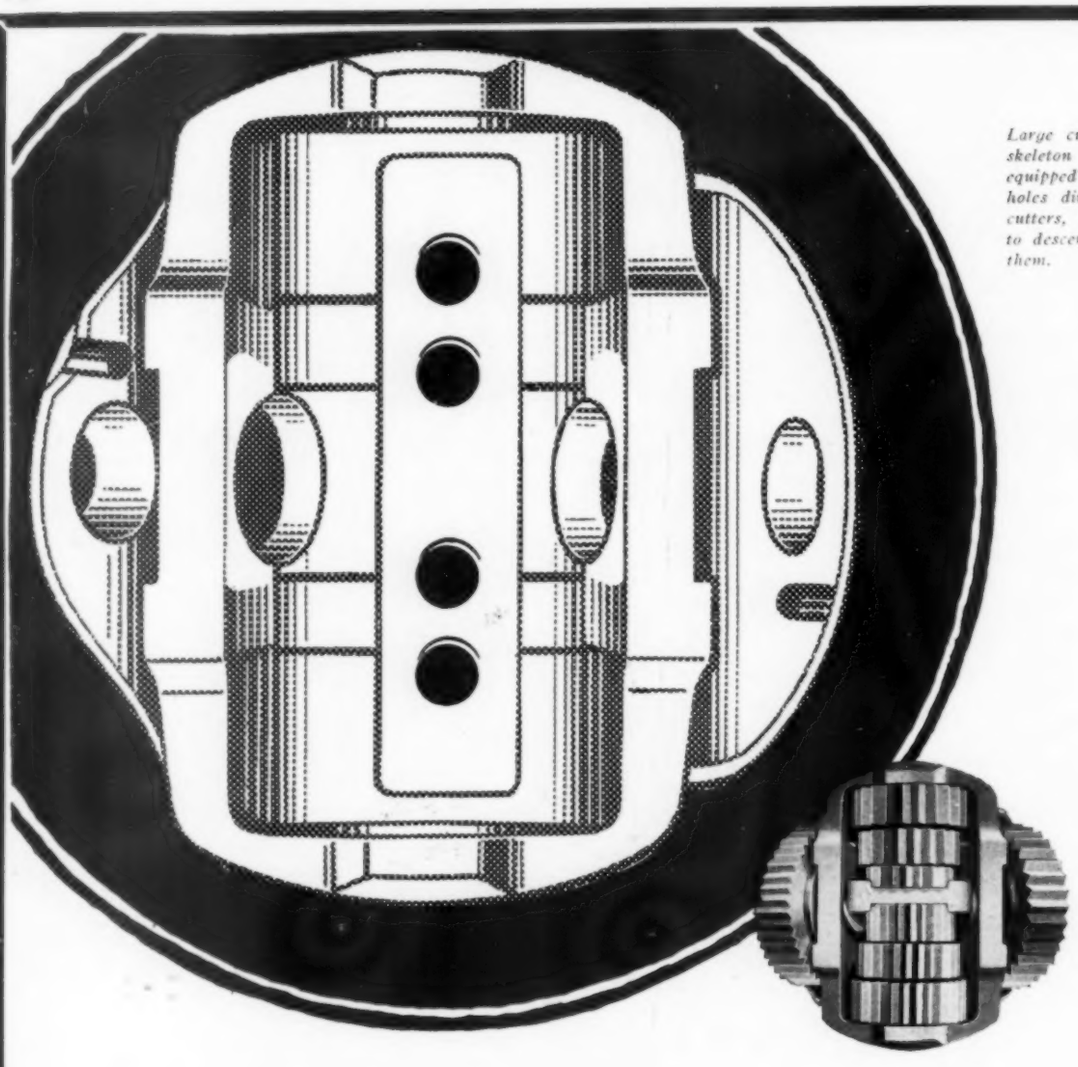
Harrisburg Couplings will not crack, strip nor gall and have no piping to develop leaks.

Introduce your tubing, drill-pipe and casing to Harrisburgs—they'll become friends that never part.

Stocked and Sold by Leading Supply Houses

HARRISBURG PIPE & PIPE BENDING COMPANY
Harrisburg, Pa.
DISTRIBUTORS:
Harrisburg Pipe & Pipe Bending Co., of Texas, Inc., Houston, Texas
Harrisburg Supply Company, Tulsa, Okla.
Mr. George J. Hausen, Los Angeles and Taft, California

HARRISBURG



Large cut at left shows skeleton head of the bit equipped with series of holes directly above the cutters, permitting slush to descend directly upon them.

Slush Lubrication Does Double Duty

Some of the crystals of "cut rock" are much harder, sharper-edged and more abrasive than the formation before it is cut, and if not rapidly disposed of, will dull and quickly wear out any rock-cutting tool.

The head of the Reed Rock Bit is provided with four holes, focusing the full force of the slush column directly upon the cutters.

All "cut rock" is immediately carried away by the force of the slush stream, and at the same time, the bearing surfaces of the cutters are kept well lubricated.

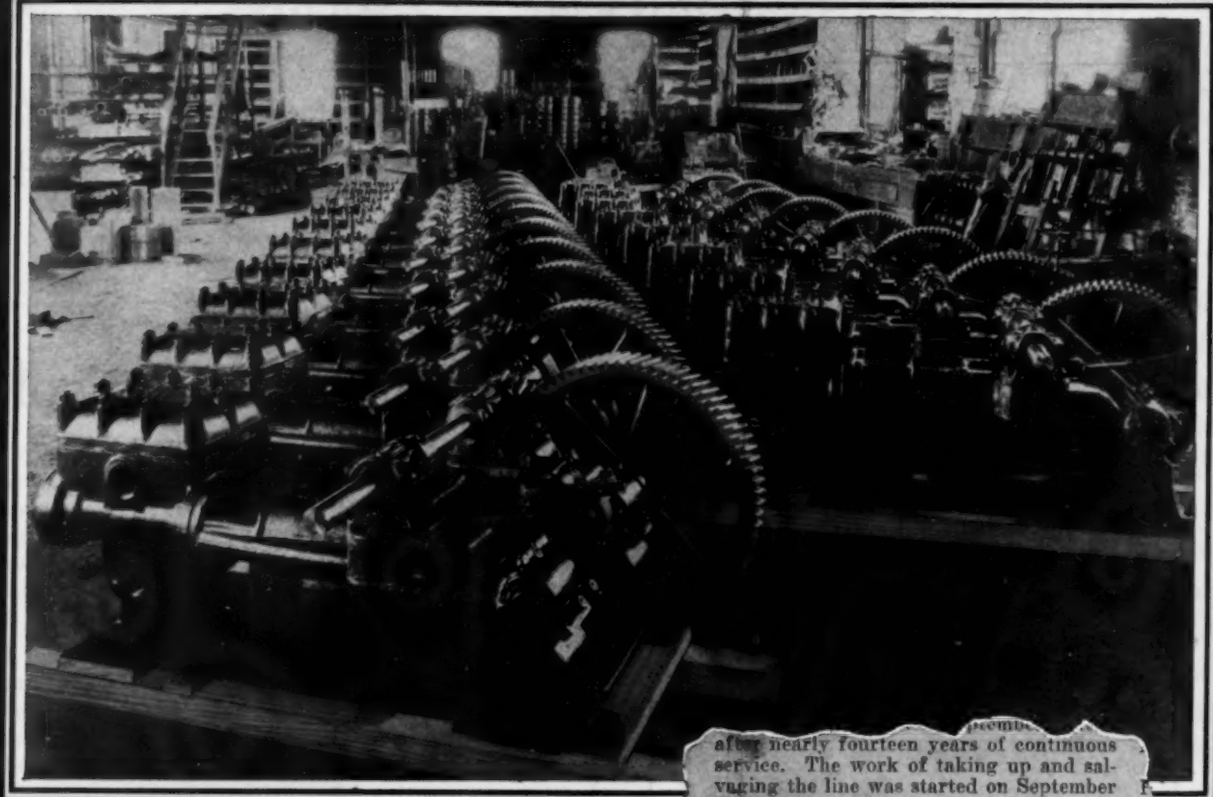
This very effective principle of slush lubrication is one of the exclusive features of Reed Rock Bits.

Reed Rock Bits

Reed Roller Bit Company

HOUSTON LOS ANGELES

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879



PART OF A BIG ORDER OF GASO NO. 508 PUMPS READY FOR SHIPMENT TO MIDWEST REFINING COMPANY, SALT CREEK, WYOMING

MIDWEST SALT CREEK GASO PUMPS

"OUR BIGGEST WORK AT SALT CREEK DURING THE YEAR HAS BEEN THE ADOPTION OF— ELECTRIC POWER PUMPS"

READ THE CLIPPING FROM MIDWEST REVIEW'S ARTICLE BY G. M. VANDAVEER, GENERAL SUPERINTENDENT OF PIPE LINES. 109 NEW PUMPS WERE INSTALLED. ALL WERE GASOS!

GASO PUMP & BURNER MFG. CO.
TULSA, OKLA.

after nearly fourteen years of continuous service. The work of taking up and salvaging the line was started on September 29th and to date, approximately fourteen miles has been removed and either sold or is awaiting use again in other parts of the field. The work of taking up the line is now practically at a standstill due to weather conditions which will be resumed again in the early spring.

By far our biggest work at Salt Creek during the year has been the adoption of electric power pumps to take the place of steam and gas engine driven pumps. The [illegible] going on since the early part of the year and at the present time, we have one hundred and fifty-five of these pumps installed. One hundred and nine of these are new pumps, made by the Gaso Pump and Burner Mfg. Co., and are gear driven by 25 HP, three phase, constant speed induction motors made by the General Electric Company. The balance of forty-six pumps are old steam and gas engine power pumps which have been converted for use with electric motor drive. Electric power pumps have proven better in every way than the steam or gas engine pumps, as they require less attention, are more economical in operation and, being driven by constant speed motors, do not run the risk of tearing themselves to pieces if they loose suction while the operator is away from the pump building.

During the year, we laid in the Salt Creek field, 54,943 feet of various sizes of water line, 180,123 feet of oil gathering line and during the same period, took up 104,973 feet of oil gathering lines. At the present time, our Salt Creek-Casper trunk lines consist of three main lines, each of

GASO PUMPS

Charles Shuman, Production Superintendent, Sinclair Oil & Gas Company's well, John Powell No. 4, at Drumright, Oklahoma.

John Powell No. 4 well, where 1200 pounds of EAGLE *Lead Wool shut off a flow of 950 barrels of water per day—reducing the water from 70% to 10%.*

FREE
Booklets sent upon request

Water in this Sinclair Well was reduced from 70% to 10% with EAGLE Lead Wool

AT the Sinclair Oil and Gas Company's well, known as John Powell No. 4, at Drumright, Oklahoma, water was coming in at the rate of 950 barrels a day. And water at this well was particularly destructive because the well is located on a high spot and this flow of water into the low valley would be a serious menace.

But Charles Shuman, Production Superintendent in charge, brought Eagle Lead Wool to the rescue. 1200 pounds were used and the water was shut off—reduced immediately to a 10% flow. Mr. Shuman believes, as a result of his experience with EAGLE Lead Wool, that there is nothing to compare with it for shutting off bottom water.

Eagle Lead Wool is as easy and quick to handle as ordinary rope. In just a few minutes the special Eagle Cartridge Container is stuffed ready for use. It is economical and shuts off the water immediately.

You can order it from your dealer, who stocks the Special Cartridge Containers in all sizes. Or write direct to Joplin. Free descriptive booklets will be sent on request.

The EAGLE-PICHER LEAD COMPANY
Chicago · Joplin · Cincinnati

EAGLE LEAD WOOL

and Cartridge Containers

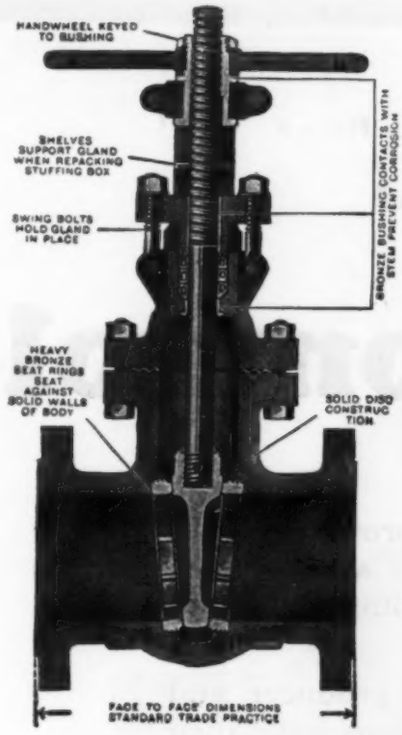
Producers of lead and allied products · Eleven Plants · Branches in all principal cities

The New Designs of

LUNKENHEIMER

IRON BODY BRONZE MOUNTED

GATE VALVES


HANDWHEEL KEYED TO BUSHING
SHELVES SUPPORT GLAND WHEN REPACKING STUFFING BOX
SWING BOLTS HOLD GLAND IN PLACE
BRONZE BUSHING CONTACTS WITH STEM PREVENT CORROSION
HEAVY BRONZE SEAT RINGS SEAT AGAINST SOLID WALLS OF BODY
SOLID DISC CONSTRUCTION
FACE TO FACE DIMENSIONS STANDARD TRADE PRACTICE

have received the stamp of highest approval wherever they have been installed. And the list of users includes many discriminating operating executives whose extensive experience makes them competent judges of what a really good gate valve should be. The new line of Lunkenheimer Gate Valves inherits the quality characteristic of all products manufactured by The Lunkenheimer Company. They embody the best engineering thought, highest grade materials, the most modern foundry and plant facilities, and skilled workmanship by craftsmen who are specialists in the manufacture of quality valves.

Outstanding Features
which will appeal to all users of Gate Valves

Face to Face Dimensions—Standard Trade Practice.

Machined Guides—Long ribs in body as well as the grooves in disc are carefully machined, and engage with minimum clearance. The disc rides straight and true to its seat without detrimental chattering or marring of seat faces.

Solid Bronze Disc in sizes up to 6-inch; iron disc with bronze faces in 7-inch and larger sizes.

Bronze Stem Bushings. Prevention of corrosion with consequent ease of operation is assured by renewable bronze bushings provided at all bearing points on stem, eliminating contact with iron parts of valve.

Heavy Bronze Seat Rings. Rings seat against solid walls of valve body—do not depend on a small flange on outer edge of ring to effect a joint with body.

Swing Bolts hold gland in place; entire removal of nuts unnecessary to raise gland.

Two Shelves cast within yoke arms support gland when repacking stuffing box.

Renewability. All parts are renewable, including the seats and disc, making the valve as a whole practically indestructible.

The maximum working steam pressure and the water pressure ratings are as follows:

Pattern	Steam (450° F.) All sizes	Liquid (100° F.) 12-inch and smaller
Standard	125-lb. W. S. P.	175-lb. W. P.
Extra Heavy	250-lb. W. S. P.	400-lb. W. P.

All Iron Gate Valves for handling solutions which attack bronze but not iron, and *Quick Operating Gate Valves with lever*, are also procurable.

Lunkenheimer Distributors, located in all industrial centers, carry large stocks, and render prompt service. Call on them for your requirements.

Complete information is contained in Gate Valve Book F. 511 JK a copy of which can be had upon request, without any obligation on your part.

JUST FILL IN AND MAIL THE COUPON.

THE LUNKENHEIMER CO.
"QUALITY"
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NEW YORK CHICAGO BOSTON LONDON
EXPORT DEPT. 129-135 LAFAYETTE ST., NEW YORK

THE LUNKENHEIMER CO. P. O. Box 876, Cincinnati, Ohio
"QUALITY"
Gentlemen:—Please send me, without obligation, a copy of your Gate Valve Book No 511.
Name .....
Firm .....
Address .....

6-42-90

Regan Pipe Suspension

Feature No. 3

Pressure Control

The Regan Head is constructed to provide the operator with the utmost in control over all pressures encountered during the process of drilling and maintained when producing.

Every drilling well is a potential producer and when equipped with this Head provisions have then been made that positively eliminate the ever-present danger of its RUNNING WILD with the often resultant cratering and consequent flooding of sand.

After the well is safely on production this head also provides a positive and most effective means of holding back the gas pressure, using the minimum volume to produce a given amount of oil. This action tends to prevent infiltration of water into producing sand—consequently lengthening the life of the field.

Regan

Forge & Engineering Co.

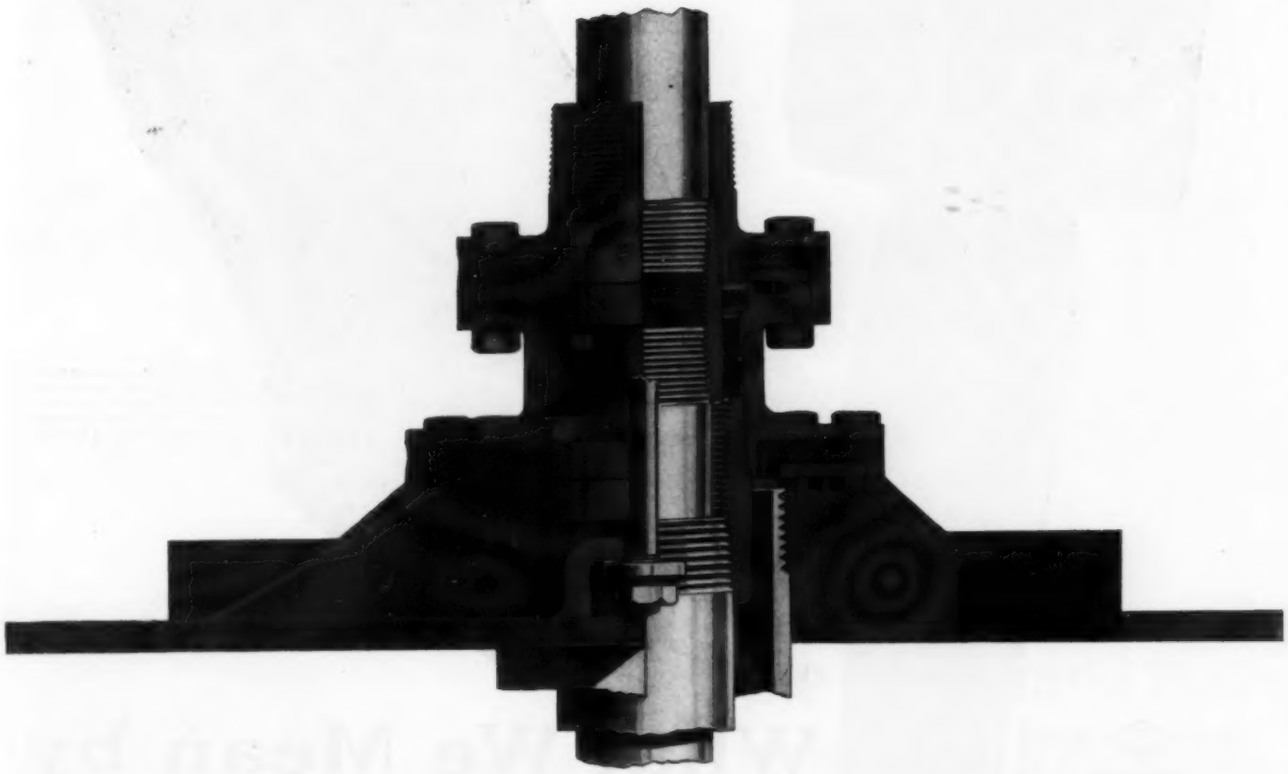
San Pedro — California

Quality — Wrought on the Forge of Experience

Designers and Manufacturers

Say you saw it in The OIL WEEKLY

and Control Head



CRATERING of a well is invariably due to insufficient protective means. By using Regan Control Head the danger of cratering is minimized and may result in saving thousands of dollars. No well can afford not to be equipped with the Regan Head.

Lew D. Hilton, who is in charge of our Mid-Continent office at Houston has had a wealth of experience in directing oil drilling production and has for many years been recognized as especially qualified on control work. His services or his advice are at your command without charge. Call on him.

Main Office and Plant:
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1521 Post-Dispatch Bldg.
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406 W. First St.

New York.
The Evening Post Building
75 West St.,
Exports

of Quality Oil Well Equipment

Say you saw it in The OIL WEEKLY

Sivyer Castings can be forged and welded

To the left is a latch, and to the right a jaw, casting for an oil well tool and pipe tong. Both of these important parts are cast in Sivyer Electric Steel.

SIVYER CASTINGS DEPENDABLE

What We Mean by Interior Soundness

THE casting pictured to the left, above, is an example of what we mean by *interior soundness.* In this particular job the light section at the lower end of the piece tends to draw the metal as the casting cools. The natural result of such an action is a "shrink hole" somewhere along the lower end of the thicker head. A casting with such a defect must either be scrapped or be passed on with the danger of breakage in service. Here, as in so many other cases, Sivyer Foundry Practice has been able to eliminate both dangers for the manufacturer. A careful study of the part has led to the proper distribution of "heads," "gates," "risers" and "feeders" on the casting pattern. As a result, the natural "shrink" has been definitely "licked." How completely, is illustrated by the fact that not a single one of these castings has been reported as having broken in service.

SEND BLUE PRINTS

If you are having trouble with castings cast in other metals or by other methods, it is quite probable that Sivyer Electric Steel may be your solution.

At any rate the cost of sending us blue prints of the parts giving trouble is small — and we will be glad to tell you all we can without obligating you in any way

SIVYER STEEL

SIVYER STEEL CASTING COMPANY, MILWAUKEE

MID-CONTINENT OFFICE, 1415 F. & M. Bank Bldg., Ft. Worth, Texas.

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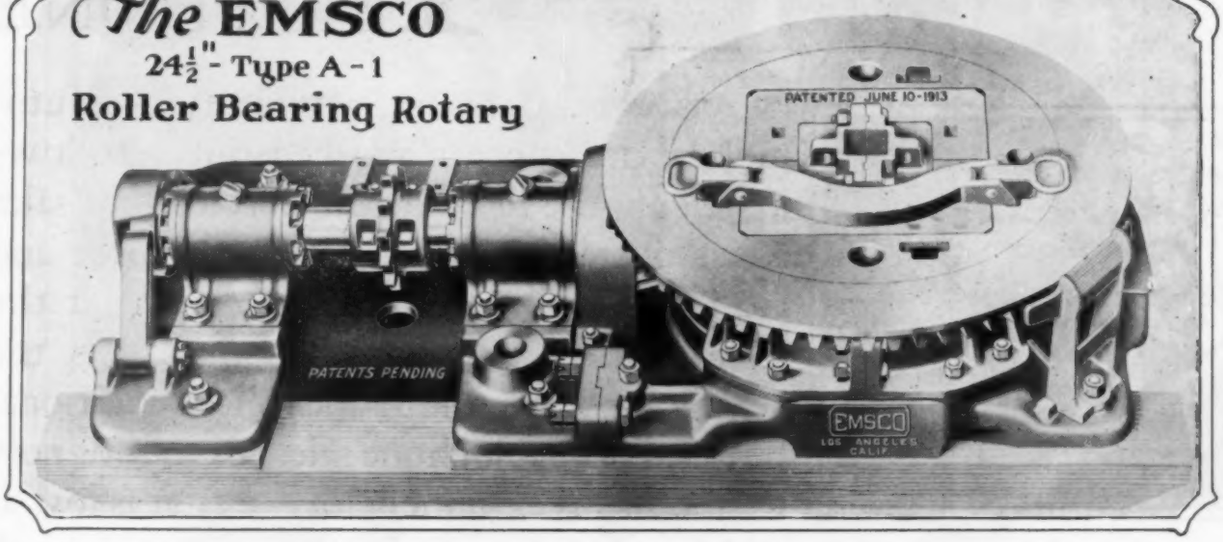
EMSCO
A Complete Line of Better Oil Well Equipment

The EMSCO
24½" - Type A-1
Roller Bearing Rotary



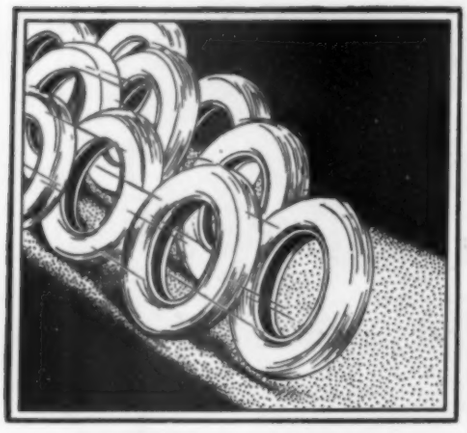
Grinding the large hardened alloy steel cone rollers for the Emsco Rotary—a step in the superior manufacture of these machines that results in better and longer service.

the smoothest running and longest wearing Rotary in the field today.

EMSCO
Derrick & Equipment Company
Los Angeles ♀ ♀ California
Houston ♀ ♀ Texas

Say you saw it in The OIL WEEKLY

They keep sales rolling by LONG DISTANCE TELEPHONE



IN ATLANTA, GEORGIA, a wide-awake automobile tire concern worked out a follow-up telephone sales campaign. Telephone sales are assigned definitely to one employee and are his entire work. Fifteen days after the visit of each salesman this man gets the dealer on the telephone and solicits additional business. The telephone sales cost of this new business runs extremely low—often as low as one-half of one per cent on the total volume of new business secured!

BONDS AND BRICKS, ice cream and locomotives, matches and coal, groceries and flowers, textiles and real estate — these and dozens of other commodities are being bought and sold by long distance telephone. Long distance calls reach customers and prospective buyers who otherwise could not be reached so cheaply or promptly, if at all. They save the strength and health, as well as the time, of executives and salesmen. A long distance call covers hundreds or thousands of miles and *gets the answer* in a small fraction of the time and trouble required by any other means of communication.

Are you and your concern using your telephone arm with which to outreach distance for business? Are your executives in constant contact with their men and with important customers? Are you using the telephone on the principle of the heaping measure—to get new business at almost negligible expense — new business that otherwise would be lost?

The Commercial Department of your local Bell company will gladly study your business and lay out a program of Long Distance selling, buying or collections. In the meantime you can talk 400 or 4000 miles just like speaking across the street. What far-distant call would you like to make, now? . . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

LUCEY

All-Steel Rotary

for Drilling and Making up Pipe

- ¶ Built entirely of steel electrically annealed.
- ¶ Timken Roller Bearing for drive shaft with Alemite Oiling system.
- ¶ Steel Ground Roller Bearings for rotary table.
- ¶ Flat Top Table—No projections to interfere with handling of tools.
- ¶ All Drive Bushings securely locked in place and easy to remove.
- ¶ All moving parts run in a bath of oil—No foreign matter can enter.
- ¶ Ample provision for taking up wear.
- ¶ Constructed of few parts.
- ¶ Simple to change from a drilling machine to a machine for making up pipe.
- ¶ Base is made in one solid piece.
- ¶ Made in 20" and 28" sizes.
- ¶ Full openings through tables 20 inches and 28 inches.
- ¶ Weights complete 7150 pounds and 9150 pounds.

Distributors:
Lucey Manufacturing Corporation of Tennessee:
Mid-Continent General Office and Central Warehouse, Tulsa, Okla., with branches at Tonkawa and Healdton, Okla.

LUCEY MANUFACTURING CORPORATION
CHATTANOOGA, TENN.

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What makes a man valuable to you?

AREN'T these the things that you appreciate most?—*loyalty—dependability—proven ability to get things done right without requiring constant attention and nursing—reserve strength and power equal to emergencies.*

You want exactly the same characteristics in your power equipment!

Bessemer equipment is planned, designed and built with this goal in mind—to produce equipment which not only renders faithful, care-free service around the calendar under routine conditions but stands the gaff of the emergency just as successfully.

No single part is approved on preliminary blueprints or in the final inspection unless it allows for the hardest test it can face under practical operating conditions out in the field. The extra margin of performance—the safety factor so vitally necessary to you—is built into it before it leaves the factory.

THE BESSEMER GAS ENGINE CO.
62 York Street ∴ ∴ Grove City, Pa.

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS – VACUUM PUMPS – ROLLER PUMPING POWERS

THE BESSEMER GAS ENGINE COMPANY

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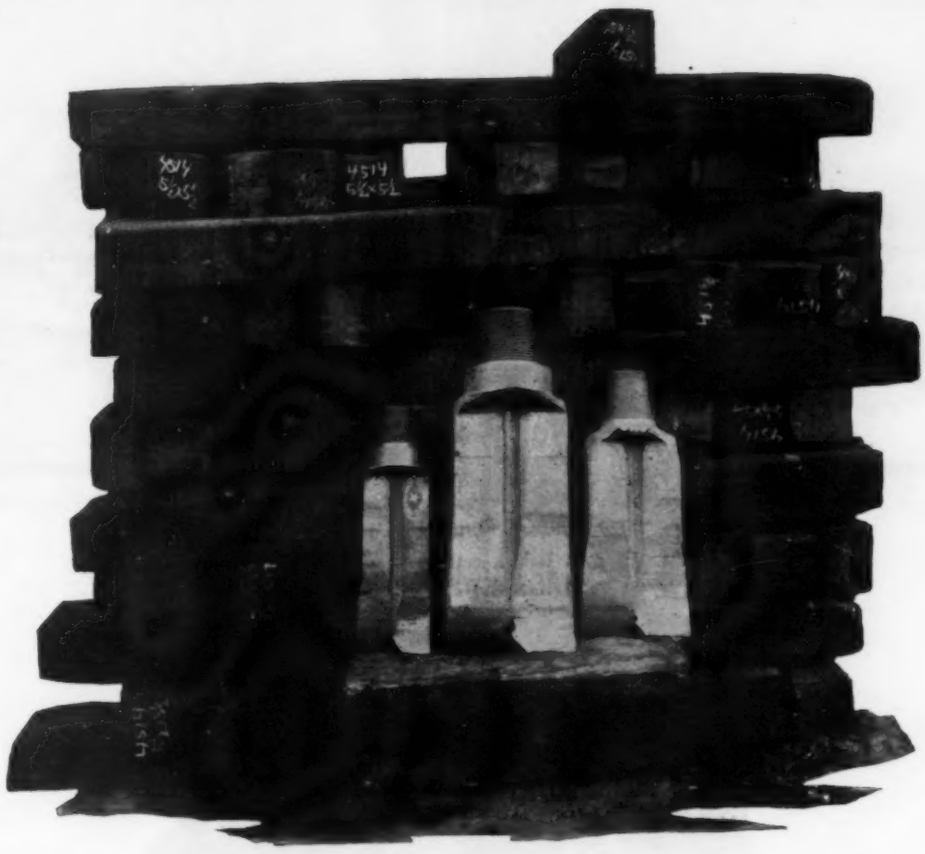

A Pile of Happiness for Some Driller

Somewhere there's a driller who is going to get bits made from this pile of Agathon Alloy Steel billets. And when he does, he's going to find out what a poor sport rock is when it meets real steel. For those bits are going to chew up three times as much rock per hour than bits made of ordinary steel ever thought of doing. And they'll do it with one third of the pullings—one third of the delays and at a tremendous saving in dollars and cents. Better send for our Agathon Alloy Steel handbook and see that your next order of bits are made of these super-steels.

Photo shows pile of Agathon Alloy Steel billets at plant of the Lone Star Tool Company, Wichita Falls, Texas.

AGATHON STEELS

THE CENTRAL STEEL COMPANY, Massillon, Ohio

Swetland Bldg., Cleveland — Book Bldg., Detroit — Peoples Gas Bldg., Chicago
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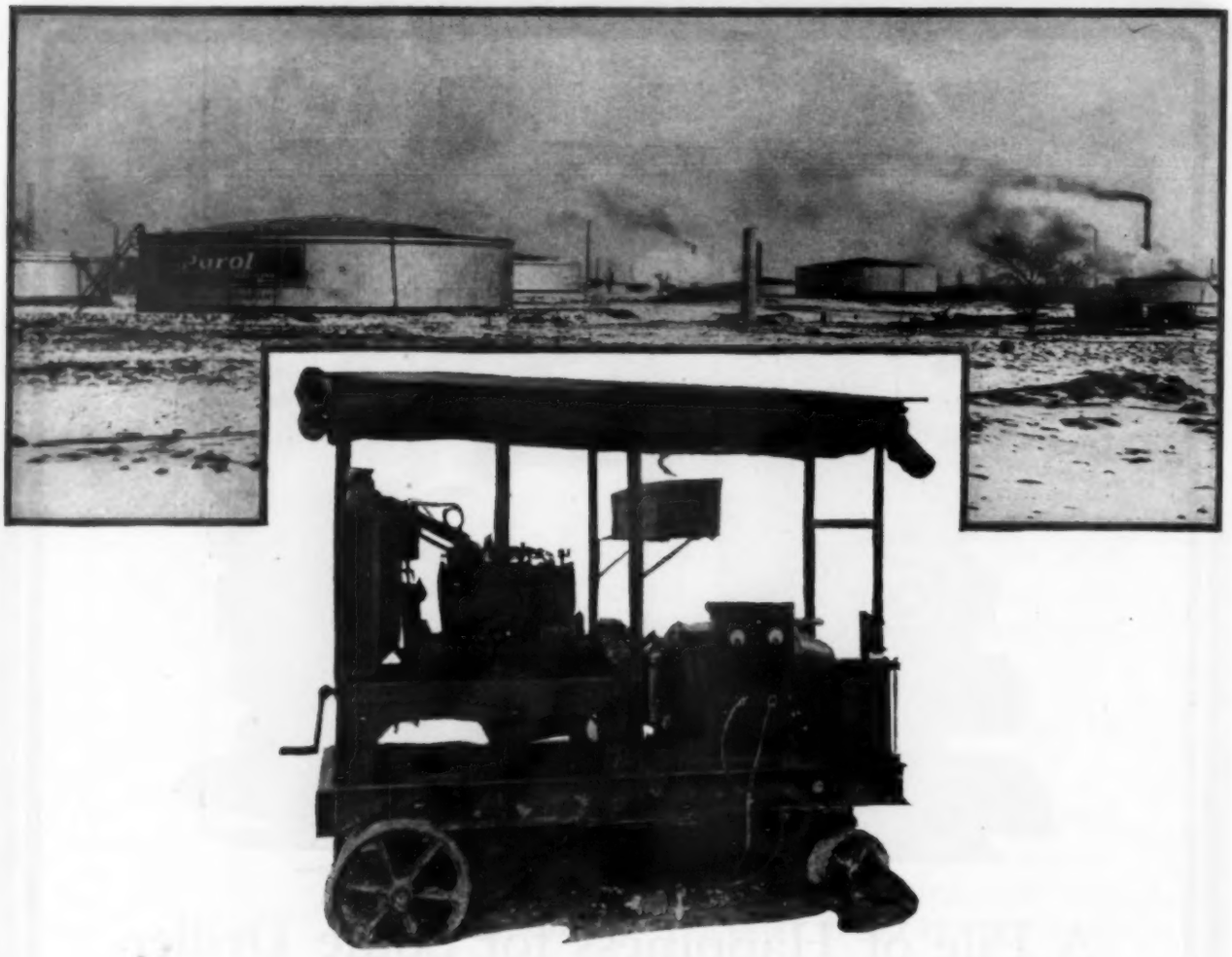
AGATHON ALLOY STEELS



G-E Arc Welders—In Oil Fields and Refineries

This G-E Portable, Buda Engine-Driven Arc Welder is used on countless repair and construction jobs in oil fields and refineries.

In oil fields: Haul it with a tractor to wherever the job may be and set it to work on repairs or on the construction of pipe lines and storage tanks.

In refineries: Move it quickly from place to place, now constructing, now repairing, now salvaging all types of tanks, piping, and other equipment.

In both fields of work the job is done faster, the job is done better, the job is done with impressive savings. Welded construction of pipe lines will often save 25% of the cost of coupled construction, while the welding of storage tanks prevents leaks which cause an annual loss of 5% of the stored product.

Learn more about this G-E Welder, its applications in oil fields and refineries, and the savings effected by its use. Write to your nearest G-E sales office for publication GEA-9.

G-E Motor-driven Welders are also furnished and used in oil fields and refineries. Ask for bulletins.

28-18

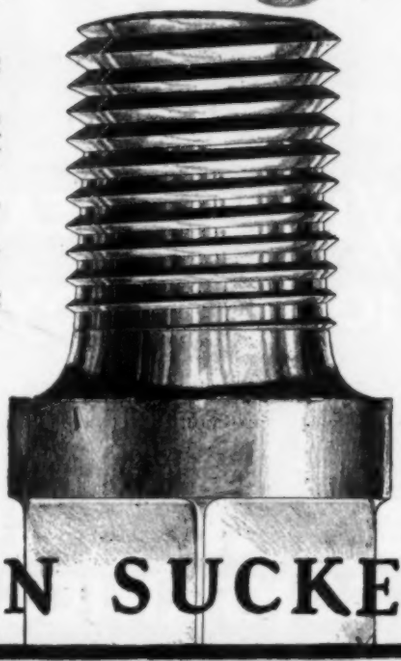
GENERAL ELECTRIC

NERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN ALL PRINCIPAL CITIES

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

The Axelson Vanishing Thread gives sustained strength

Axelson Rods are amply fortified, both in quality of material and construction to prevent premature breaks.



The Axelson Vanishing Thread provides additional strength where the strain is greatest.

AXELSON SUCKER RODS

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Axelson Machine Co., Los Angeles, Tulsa, St. Louis, New York.

Service stores and factory representatives in all principal oil fields.

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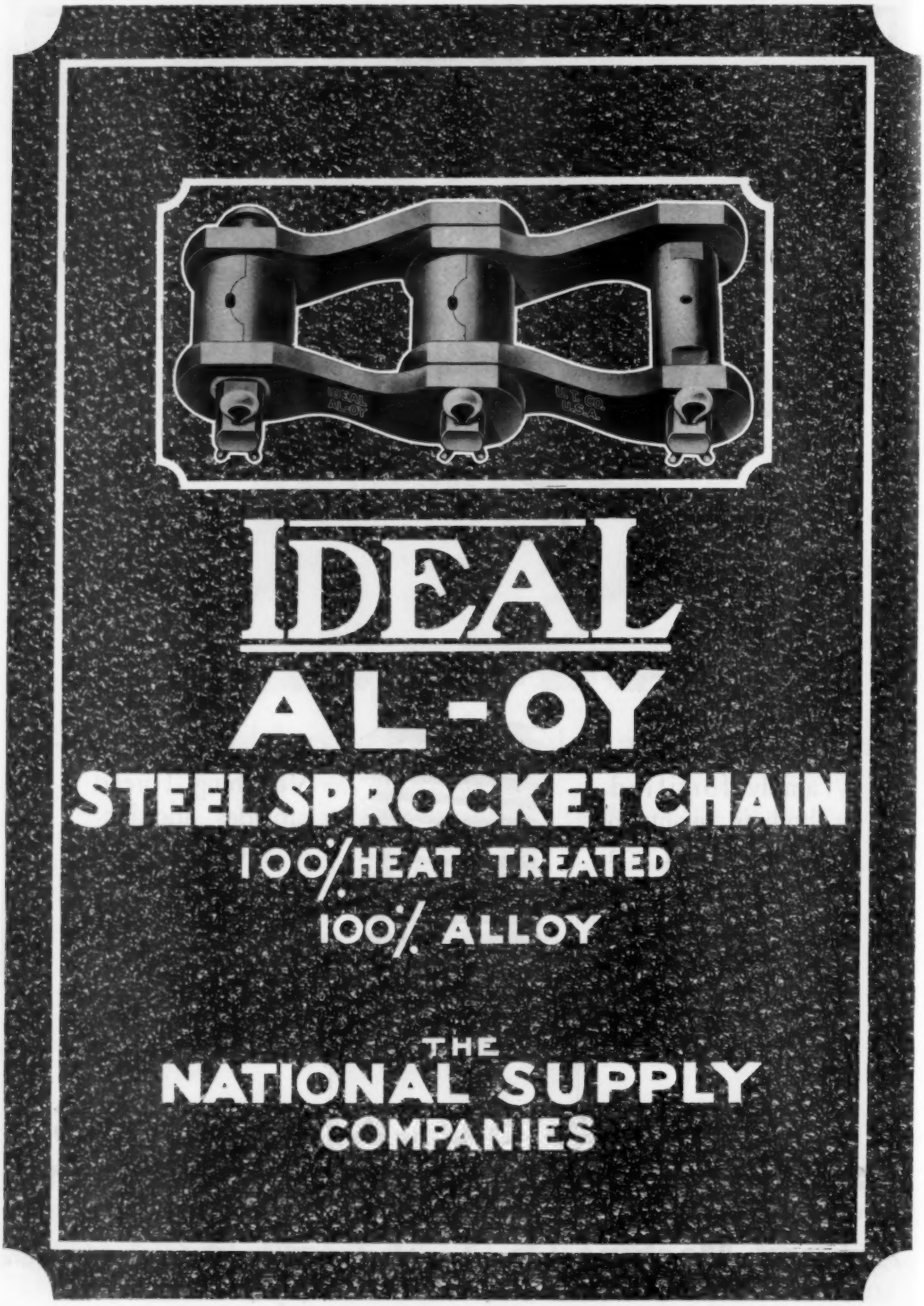
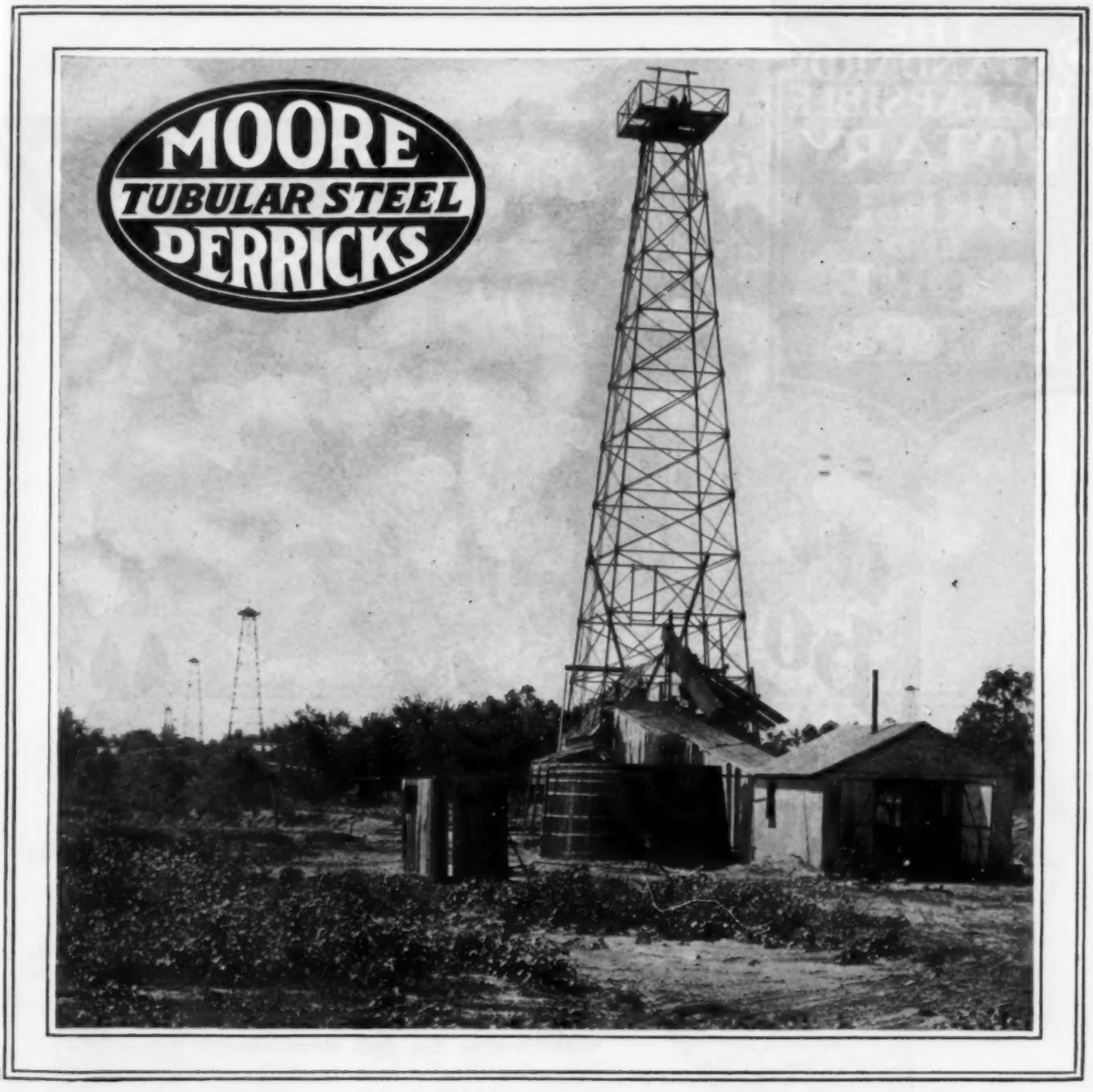

IDEAL
AL-OY
STEEL SPROCKET CHAIN
100% HEAT TREATED
100% ALLOY
THE
NATIONAL SUPPLY
COMPANIES



Strength for Every Emergency

The tube or pipe, when used as a column to carry compressive loads, is the strongest structural section known. It gives a greater strength by a margin of 40% or more as compared with other structural sections — the very thing you need to meet every emergency of time and service. This simple fact, with many other exclusive features of the Moore construction, accounts for its proven dependability. Of course, the Moore derrick costs more money; but that you ultimately make up in savings on freight and hauling alone. For the Moore is not only the strongest, but also the lightest derrick in existence. That's why there are more Moore derricks sold and in use than all other steel derricks combined.

Ask for illustrated catalog

Lee C. Moore & Co., Inc.

Pittsburgh, Pa. Tulsa, Okla.

Established 1907

Casper, Wyo. Dallas, Texas
Shreveport, La. Parkersburg, W. Va.

THE STANDARD COLLAPSIBLE ROTARY DRILL AND CORE BARREL

"DIAMOND HARD" CUTTERS at the bottom of the hole!

AND THEY WILL NOT BREAK

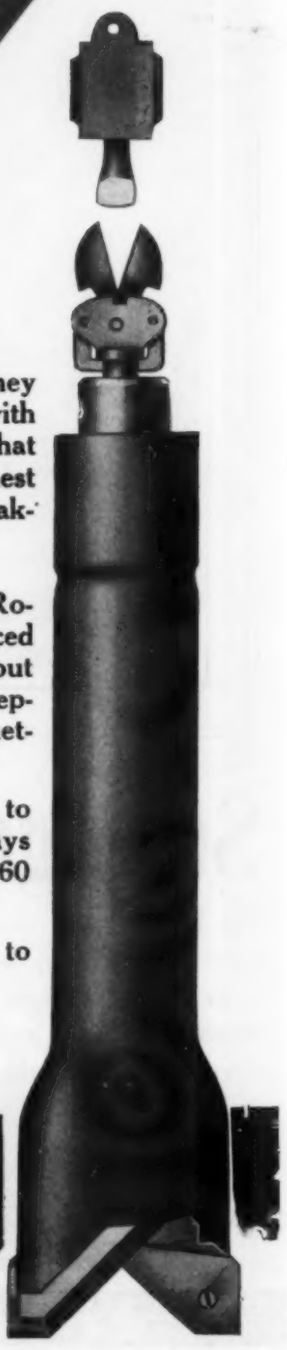
Cutters so hard they will cut flint, but with a non-brittle core that will stand the roughest abuse without breaking.

And the Standard Collapsible Rotary Drill Cutters can be replaced in from 10 to 20 minutes without withdrawing the drill stem—keeping scientifically heat treated metals ALWAYS "on bottom."

Then by attaching the Standard Core Barrel to the bottom of the drill, a perfect core is always brought to the surface in from 30 to 60 minutes.

Think what this time saving would mean to you!

Write for illustrated literature.



O. M. CARTER

W. T. HILTPOLD SALES AGENT

206-7-8 SCANLAN BLDG.
HOUSTON TEXAS

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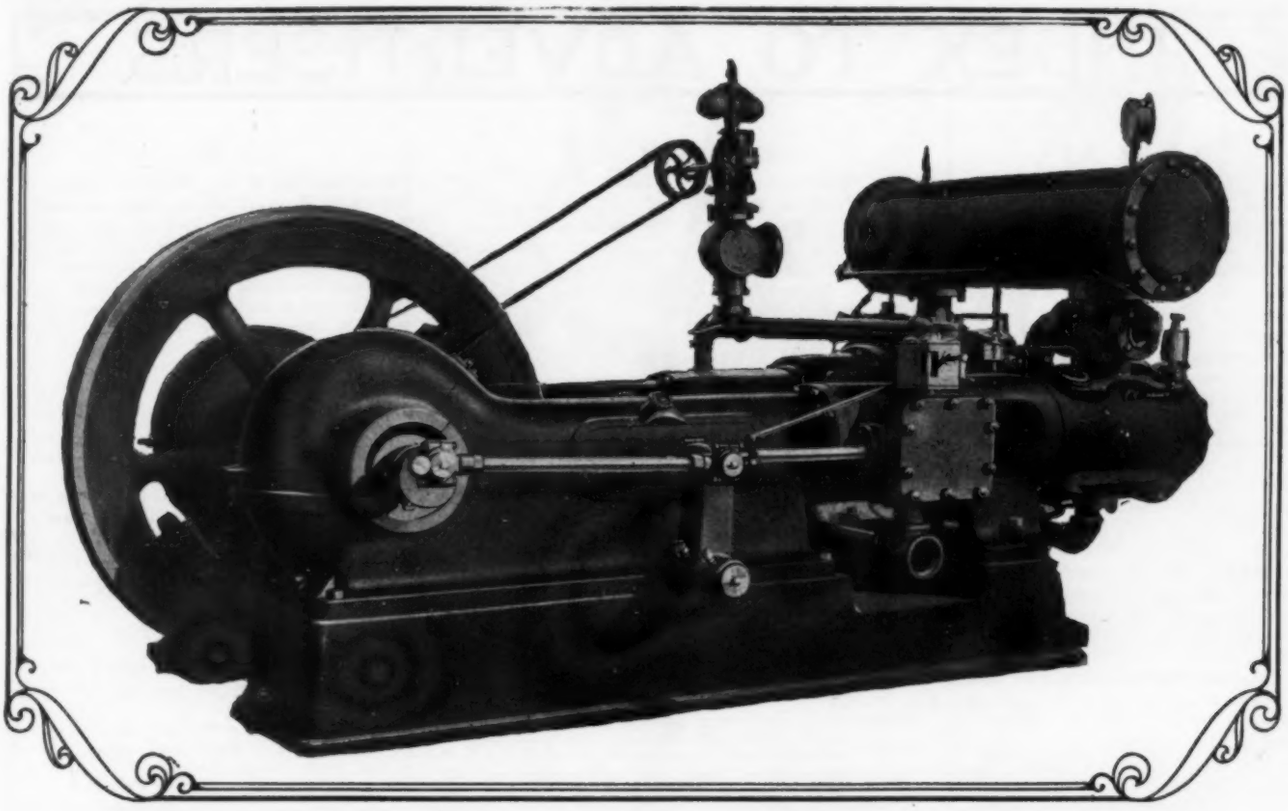
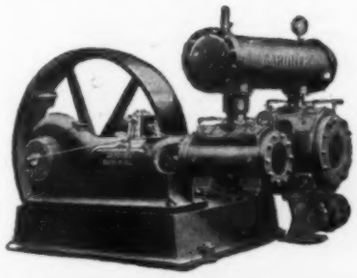


Air Lift for Oil Wells



Boosts Flow When Gas Pressure Declines

The use of air-lift to supplement gas pressure in flowing wells, when flow declines, has proved practical and economical. Air-lift is now in wide use for this purpose in the Mid-Continent, Gulf Coast and California fields.

GARDNER 2-stage Compressors, in 8 and 4x8, 10 and 5x10, 12 and 6x12, and 12x14 and 6x12 sizes, are ideally adapted for oil field air-lift work and are in use for this purpose. These sizes give pressures from 250 to 600 pounds and up to 500 cu. ft. displacement. Ask for descriptive bulletins.

"Quality Builders for Over 65 Years"

THE GARDNER GOVERNOR COMPANY

Quincy, Illinois

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Pelican Well Tool & Supply Co., Shreveport
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GARDNER GOVERNORS PUMPS COMPRESSORS

GARDNER

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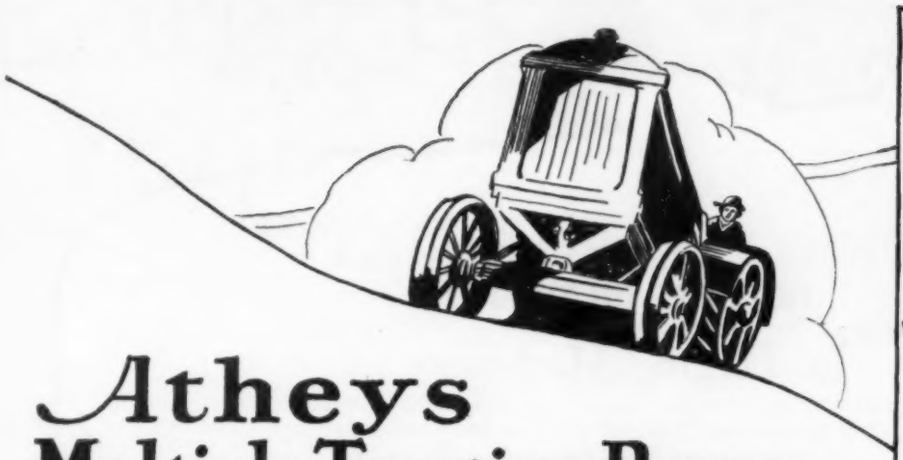

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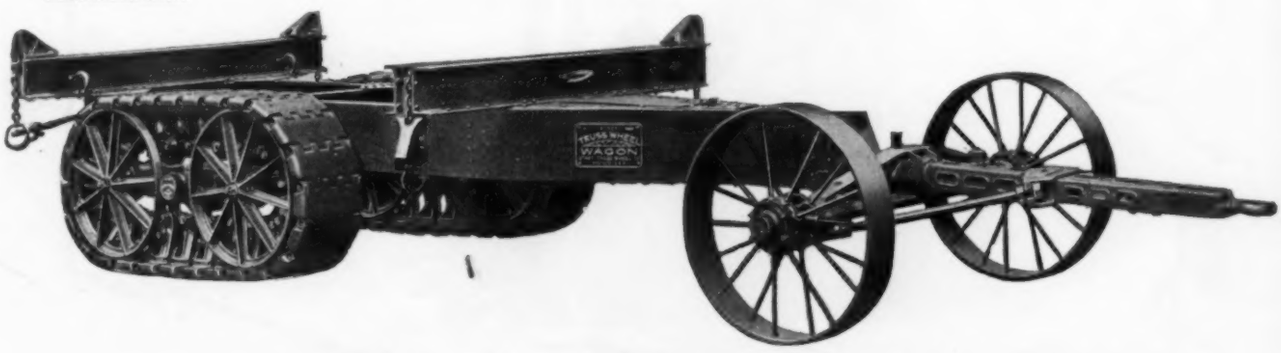

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The OIL WEEKLY

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Say you saw it in The OIL WEEKLY

Production is Still Sought by Larger Companies

First seasonal demand for gasoline is being felt in Mid-Continent

DEALS for production continue to hold the spotlight in Mid-Continent crude oil circles.

The latest transaction to be completed is that by which the Mid-Continent Petroleum Corporation of Tulsa becomes owner of properties of the Jomack Oil Company in the Bristow area.

Aside from production of around 800 barrels daily, the deal involves 6000 acres in leases as well as fee holdings. This acreage is in both Oklahoma and Kansas.

Mid-Continent Petroleum Corporation has a pipe line to the Bristow area and will run the oil to its refinery in West Tulsa. Mid-Continent has been one of the foremost premium payers in the Mid-Continent since early in the year. This deal for more production is taken as an indication of efforts the concern may take to build up sufficient well output to take care of refinery needs.

Both the Prairie Oil and Gas Company and the Skelly Oil Company are reported negotiating for properties of the Cassody Oil Company in Kansas. This deal should be completed this week, with indications that the Prairie will become the owner.

Another Property on Market

Another property known to be on the market is that of the Southwestern Petroleum Company. Several deals have made progress on this but none has yet come to settlement. Because of partnership leases and past friendships in dealings, the Carter Oil Company is looked upon as a likely buyer of Southwestern holdings. Other concerns, however, have been after the production of this company.

The spot market on crude oil is unchanged. Indications are that it will gather strength by early summer.

One cause for such a prediction is that the Mid-Continent crude oil price structure has held up through the winter in good style. One raise early in the year was sufficient to keep both refiners and producers satisfied. This period of even price has put the producing end of the industry in strong position, without the jeopardy of excessive high prices at an improper season.

Another reason for a prediction of early strength in the crude oil market is that refiners seem sure to increase runs within a few weeks.

Gasoline Demand Being Felt

The demand for gasoline has just begun to assert itself for summer trade. Early this week 10½ cents was a fair price for U. S. Motor gasoline. This figure was a quarter of a cent above the market prevailing a week ago.

Kerosene too has gained sudden strength, being sold at 8 and 8¼ cents a gallon. The recent boost of 1½ cents in the service station price of kerosene in Standard of Indiana territory is partly responsible for this. Then the season of use of kerosene for tractor plowing is at hand. So kerosene looks like a product to hold strength for several weeks, as stocks are low.

Major crude buying agencies are largely responsible for the growing demand for light oil in the Texas fields, as the independent refiners have not recovered sufficiently from the seasonal slack period on gasoline movement to actively participate in the campaign for additional crude supply. The larger companies are aggressively seeking new oil to safeguard their requirements over the approaching peak consumption period, and in many instances lately have gone to considerable trouble and expense to get production from new discoveries made beyond established pipe line facilities.

Competition for Texas Light Oil

Competition for crude in Texas fields has led to a general practice being employed by major companies in building local gathering lines and making shipments in tank cars when new connections are obtained from wildcat producers and in fields not served by their lines. This condition being especially true in the Texas Panhandle district, where Magnolia, Marland, Sinclair and Gulf have lines that will handle their own production and crude purchased from other producers to nearby railroad points for re-shipment via tank cars to the Gulf Coast until a direct pipe line outlet is justified. Magnolia and Sinclair have their lines in operation in the Panhandle, while Gulf and Marland will begin making shipments next month.

Sinclair is building tankage to serve the Howard Petroleum Company's shallow wildcat oil producer in Northeast Young County along with a field gathering system to accommodate the producers. When production justifies a direct pipe line, Sinclair will build 25 miles of line from its Moran pump station in the Bunger field. Humble Pipe Line Company recently built a gathering line and tank car loading rack to serve the Cook Ranch field discovery well in Shackelford County to handle the purchased oil until 14 miles of six inch line could be built to the field. Marland Pipe Line Company has since entered the Cook ranch field with a private gathering line to make tank car shipments of all crude purchased by Marland to its export terminals at Texas City. Marland is preparing to make a similar installation to serve the Owen-Sloan Corporation's shallow wildcat oil producer in Howard County section of West Texas, while Marland is also serving the producing wells in the Hurdle district, near the Crane-Upton County line, in the same manner. Magnolia is building additional storage to accumulate oil in the Mirando district, near Laredo, pending the growth of production in the district to a level that will justify the extension of its eight-inch trunk line from the Luling field.

Premiums Held to Ten Cents

Crude buying activities of the major companies is receiving only negligible interference from independent refiners' premium offers, as the latter concerns are holding their bonus offers to a maximum of 10 cents per barrel on new contracts for daily crude runs, while premiums on spot crude purchases lately have fluctuated below this figure during the past two months. North Texas refiners have not been maintaining their normal rate of crude runs to stills, due to the sluggish movement of gasoline and comparatively low prices on this commodity, therefore

their crude requirements have been less. Increased demand for gasoline from domestic jobbers lately has developed a fraction of a cent boost in gasoline quotations, and any further improvement in the gasoline market situation will be reflected on the North Texas crude market, due to small plant owners reviving their interest in getting a larger crude supply. A few scattered orders for 64-66 gravity export specification gasoline were distributed among North Texas plants during the past week by Atlantic at prices ranging from 12⅛ to 12½ cents per gallon. Kerosene displayed unusual market strength, due to the limited supply on hand, and prices climbed above the 7½ cent mark. The U. S. Motor grade of gasoline was netting the refiners in North Texas 10¼ cents per gallon early this week, with some of the plant owners asking 10½ cents.

Tidewater Deal Not Violation of Law

Washington, D. C.—No violation of the anti-trust laws occurred in the formation of the Tidewater-Associated Oil Company and its acquisition of the greater part of the voting stocks of the Associated and Tidewater Oil Companies it has been announced by the Department of Justice, following an investigation.

While pointing out that the government would not be warranted in instituting proceedings based on this particular transaction, it is agreed that this conclusion will not preclude the government from reconsidering the transaction should it later appear that it is in any degree coupled with any merger or series of mergers.

Plans for the consolidation were announced March 6, the merger being effected under the Deleware laws. The consolidation of the two companies, with subsidiaries and associates, into an administration unit with assets of approximately $240,000,000 made the Tidewater-Associated Oil Company one of the largest independent companies in the country.

Following publication of the findings of the Department of Justice, it was announced that in the future the new company's common stock will be offered, completing the merger negotiations.

A. S. M. E. Officers for Mid-Continent

Tulsa, Okla.—The officers of the Mid-Continent section of the A. S. M. E., to serve for the coming year were elected at a meeting of the society held during the oil and gas power conference here last week.

They are: Chairman, H. B. Bernard, vice-president Sinclair Oil and Gas Company; vice-chairman, M. H. Kotzebue, superintendent Tulsa Boiler and Machine Company; secretary, Wm. G. Heltzel, engineer Sinclair Pipe Line Company; treasurer, Arthur S. Kerr, Equitable Motor Company; Louisiana vice-chairman, F. Ray McGrew, vice-president Standard Pipe Line Company (La.); Arkansas vice-chairman, W. Terry Field, Fordyce & Field, Little Rock; Oklahoma vice-chairman, Robert L. Rhoads, professor mechanical engineering, Oklahoma A. & M. College, Stillwater; Kansas vice-chairman, R. A. Seaton, dean of engineering Kansas State Agricultural College, Manhattan.

L. G. E. Bignell, engineer, Parkersburg Rig and Reel Company, is retiring chairman. His associates during the past year were J. A. Whitlow, vice-chairman; H. E. Musson, Oklahoma vice-chairman; Wm. Terry Field, Arkansas vice-chairman; J. P. Calderwood, Kansas vice-chairman; Chas. A. Dallay, Jr., Louisiana vice-chairman; M. B. Gilcrest, Texas vice-chairman; Wm. G. Heltzel, secretary; Arthur J. Kerr, treasurer, and E. A. Clark, the retiring chairman.

Board Fixes Value of Pipe Line

Tulsa, Okla.—Excepting the Prairie Pipe Line Company and the Oklahoma Natural Gas Company, the state board of equalization has completed the fixing of permanent valuations for the year on all major pipe line properties of the state. The board probably will make permanent valuations of the Prairie and Oklahoma Natural properties when it meets again on May 3.

Valuation of the Oklahoma Pipe Line Company was fixed at $7,250,934; Texas, at $3,390,430; the Sinclair, at $5,303,570; the Magnolia, at $2,755,688; the Ozark, at $2,414,695; the Cosden at $2,433,474; the Pierce at, $460,288; Kingwood, at $452,739; Bolene Refining Company, at $400,401; National Refining Company, at $384,535; Deer Creek Pipe Line Company, at $330,871; Illinois Oil Company, at $263,392; American Pipe Line Company, at $278,835; Healdton, at $298,310; Independent, at $273,416; Empire at $1,886,110; Gulf Pipe Line Company, at $3,840,808; Marland, at $1,326,945; Empire Natural Gas Company, at $4,827,830; Kansas-Osage Gas Company, at $308,190.

In all, forty-two pipe line operators were valued by the board with a total in excess of $40,000,000.

Among the utility companies given an assessment were the Oklahoma Gas and Electric Company, $10,928,371; the Consumers Light and Power Company, $950,188; the McAlester Gas and Coke Company, $380,000. The entire list contains twenty utilities companies that haev a total valuation of $14,000,000.

Soviet Cuts Price of Lube Oils

The Soviet government of Russia has made contracts in Western Europe whereby Russian lubricating oils are delivered to customers in wholesale lots at a price automatically fixed at one-half cent below whatever the market for American lubricating oils may be.

Low cost of manufacture, brought about by cheap labor and the general situation in Russia makes it possible for the Russian government to maintain such prices with profit, and the situation is injuring the export of American lubricating oils.

One New York oil man who is a close student of the foreign situation also says that Venezuelan lube is having a material effect on the export market of American lubes.

Not long ago, lubricating oils refined on the Gulf of Mexico, which were selling at 11 cents per gallon f. o. b. Gulf ports, were facing a competition of 8½ cents, delivered in England, from Venezuelan lube.

Of course, he points out, the export market has not been taking anything like a dominating percentage of American lube, but when the percentage that has been going to export is thrown back, it affects stocks at American refineries to a considerable degree, and consequently it materially weakens the American lube market.

However, with the motoring season opening up, a stiffening of the market probably will follow, but nevertheless, the export situation will continue to have its effect.

Will Develop Large Louisiana Block

New York, N. Y.—E. F. Simms of Houston has secured leases on approximately 2,000,000 acres of land in Louisiana east of the Calcasieu River, both north and south of the Southern Pacific railroad and is reported to be in the East negotiating with certain parties regarding its development. This is said to be one of the biggest blocks of acreage ever gathered in this state.

Output Per Well for Texas Lower Than Last Year

Absence of large flush fields brings average down to around 15 barrels

Houston, Texas.—A decline in production of approximately four barrels per well in Texas during the past year is shown by a compilation of figures on the daily average output of the 21,860 wells producing in all Texas fields in March, 1926. This number of wells turned out a daily yield during March of 344,673 barrels or a daily production of 15.76 barrels per well. Producers in Texas during March, 1925, had an average of a fraction less than 20 barrels per well.

Small Pumpers

Such figures goes to reveal the fact that the bulk of crude supplied by Texas fields comes from small pumpers with an output of an average of around 13 barrels daily. The accompanying table is proof of the fact that thousands of wells in Texas are supplying less than four barrels per day to the state's total production. It further shows that the number of wells contributing more than 100 barrels daily are rare. The diminishing supply of crude reserves and short stages of big production in the average producer is illustrated in the table inasmuch as the taking out of fields more than three years old would leave surprisingly few wells with daily averages of more than 50 barrels.

The Gulf Coastal section of Texas has aided to a considerable extent in pulling up the average of the north, central and western parts of the state, this territory holding up to an average of 32.67 barrels daily with 2358 wells. Although Boling field with seven producers in March had an average as high as 751.71 barrels per well, the substantial raise in the Coastal figures comes from such points as Orange, Hul,l West Columbia, Goose Creek and South Liberty, due to the comparatively large number of producers holding an average of from 40 to 90 barreis per well. Furthermore, these Coastal fields show little drop in the average as compared with one year ago, in that little drop is seen in the average with little drilling activity has been going on generally.

Many Dead Wells

Among the fields of the Texas salt dome area, Batson and Saratoga have the lowest production per well, they being among the oldest fields and having gone through extensive drilling practically all during the life of the fields. These two fields, together with Spindletop, show a record of more dead wells than any other field in the Coastal country. Spindletop, on the other hand, during March had 121 producers with an average of 19.65 barrels per well. This average, however, is greatly raised by three deep sand wells recently completed off the edge of the dome.

Boling field's highest average among the Coastal group is followed next by Nash and Orchard, with one well each, being only since the opening of 1926 to the productive list. There development has been and will continue to be comparatively slow since probable productive acreage is held by one company in each case.

The Laredo district has also added materially to bringing the state's average to a higher mark with its total of 163 wells averaging 56.75 barrels daily for March. Also this district is a strengthening factor in that it promises to play yet a bigger part in holding the average of Texas to a high mark in the future. Due to the recent rapid development in the various newly opened sections in Southwest Texas many small producing fields have been summarized under the Laredo-Mirando district, including such pools as the Schott, Mirando, Aviator, Randado, Cole, Piedras Pintas, Kingsville, Ina and Hondo production.

Big Lake Has Highest Average

The Big Lake field in West Texas is producing more crude daily per well than any single field in the light oil section of Texas, with an average of 316.08 barrels per well daily during March from 93 pumping and flowing wells, while one year ago this field reported a daily average of 886.44 barrels per well from 21 producers. The entire acreage in the Big Lake field is controlled by two concerns, which are in turn allied, and the development work has progressed along conservative lines, and governed by the facilities for transporting the crude from the field to tidewater.

Hutchinson and Carson counties, the two leading producing areas in the Texas Panhandle, take second and fourth place, respectively, on the daily high gravity crude yield per well, the former county averaged 124.53 barrels daily per well during March, while Carson County averaged 62.87 barrels daily per well. A portion of the production in these two counties include flush output, while on the other hand each county has leases that could produce more oil daily, if transportation facilities from the field to distant tank car racks were available. Gray County, which is also located in the Panhandle, jumped to third place during March, with a daily yield of 108.66 barrels per well, but the greater part of this was due to the completion of a flowing well about the middle of March.

Burkburnett Receding

The Burkburnett field is gradually receding to a lower crude yield per well, and during March the 3379 pumpers averaged 3.62 barrels daily, as compared to a yield of 4.43 barrels daily per well one year ago. The Electra field, which is one of ihe oldest fields in North Texas, averaged 5.75 barrels daily per well from 2930 pumpers during March, as compared to 6.59 barrels daily output from 2603 pumpers one year ıgo. The K-M-A & Iowa Park district, which is also in Wichita County, averaged 5.95 barrels daily per well during March. Archer County's 2459 pumpers averaged 13.90 barrels per well last month, as compared to 22.47 barrels from 1764 wells one year ago. These figures indicate the heavy volume of drilling that has taken place in Archer County during the past 12 months, exclusive of the many failures drilled along with the producers. Young County, which is primarily a deep producing field in the lower end, with a series of shallow pools in the north half of the county, averaged 11.22 barrels daily per well from 589 pumpers during March, as against an average of 29.15 barrels daily from 425 wells one year ago.

The combined output of the South Vernon and Noble-Dyson fields in Wilbarger County averaged 40.56 barrels daily per well during March from 340 wells, while one year ago the former field was making 87.85 barrels daily per well with 91 wells on the production list. The development work in Wilbarger County has also been active during the past year, and the county is producing more oil per well than any of the larger fields in North and Central West Texas. The Petrolia field, in Clay County, is the oldest oil producing area in North Texas, and is likewise showing the lowest daily average per well, having made 2.15 barrels daily from 220 wells. The average of the shallow wells is considerably less than a barrel each, since Gulf's three 3400-foot pumpers on the Worsham ranch

in the eastern part of the county, is accounting for about 100 barrels of the present daily production coming from Clay County. Montague County, which is producing a small quantity of high gravity oil along with the low gravity crude, averaged 34.98 barrels daily per well during March.

The deep lime pay in Stephens County, with a few wells in the south half of the county producing from the Strawn sand around the 2000-foot level, averaged 10.54 barrels daily per well from 1285 pumpers during March, as compared to 12.26 barrels per well daily one year ago. The Ranger Eastland deep pay had 586 pumpers doing 8.75 barrels daily each during March. The Desdemona-Comanche County district, which also includes numerous shallow pumpers along the Eastland-Comanche County line, averaged 4.25 barrels daily per well from 635 pumpers during March. Callahan County, which is virtually a series of small shallow pools, with a good sized pool in the 1440-foot sand in the townsite of Cross Plains, made 2.58 barrels daily per well from 1323 wells during March, as compared to an average of 5.58 barrels daily per well from 748 pumpers one year ago. The number of producing wells in Callahan County have almost doubled during the past 12 months. Shackelford County, which is largely a shallow proposition, except for deep producers in the Ibex field, is making 4.14 barrels daily from 668 pumpers, and one year ago 558 pumpers averaged 4.85 barrels daily each.

The so-called fault line fields in the Corsicana-Mexia and Luling-Lytton Springs districts, where water pressure behind the oil is a great factor in producing the oil, continue to make a creditable showing on daily crude yield per well, although no flush production of any consequence has been added in months, and several years in some of the fields. The Luling field averaged 49.62 barrels daily per well from 462 producers during March. The production curve on the Luling field has been the straightest during the past two years of any major field in the Mid-Continent, and very few wells have been added to maintain production. The Lytton Springs field averaged 20.98 barrels daily per well from 342 pumpers during March.

The Corsicana-Powell field continues to hold first honors on crude yield per well in the fault section of East Central Texas after having surrendered to Wortham for a few months early last year when flush production boosted the latter field. The Corsicana-Powell field has 825 pumpers averaging 37.66 barrels daily each, while one year ago this field was averaging 68.40 barrels daily per well from 755 wells. The gain in producing wells is largely due to shallow drilling, but none of any consequence has been done in recent months. The Wortham field was averaging 187.68 barrels daily per well from 316 flowing and pumping wells one year ago, and the average has since been cut to 35.29 barrels daily per well from 293 wells. The Mexia field has maintained production at an even rate for a surprisingly long time, having averaged 32.45 barrels daily per well from 432 pumpers during March, while one year ago this field averaged 42.96 barrels daily per well from 462 wells. The encroachment of water upon the Woodbine sand caused the plugging of wells in the East Central Texas fields, while in the Corsicana-Powell field many deep producers were plugged back and made into commercial shallow wells after ripping the casing.

Daily average production per well during the month of March, 1926, in North, Central and West Texas fields follows:

Fields—	Number Wells	Average Per Well	Field Average
Archer County	2,459	13.90	34,186
Baylor County	17	13.05	222
Brown County	428	13.48	5,772
Burkburnett	3,379	3.62	12,234
Callahan County	1,323	2.58	3,429
Carson County	31	62.87	1,994
Clay County	220	2.15	475
Coleman County	70	6.07	425
Cooke County	1	10.00	10
Corsicana-Powell ..	825	37.66	31,072
Crane County	1	110.00	110
Crockett County ..	4	56.25	225
Currie	54	19.85	1,072
Desdemona-Comanche County	635	4.25	2,698
Electra	2,930	5.75	16,850
Gray County	3	108.66	326
Hutchinson County .	43	124.53	5,355
Jack County	3	25.33	76
K-M-A & Iowa Pk.	739	5.95	4,404
Luling (*)	462	49.62	22,924
Lytton Springs	342	20.98	7,175
Mexia	432	32.45	14,021
Minerva-Rockdale District	421	3.16	1,330
Mitchell County (*)	83	39.56	3,284
Montague County (*)	51	34.98	1,784
Palo Pinto County..	152	3.58	545
Potter County	1	25.00	25
Ranger-Eastland ..	586	8.75	5,127
Reagan County ..	93	316.08	29,396
Richland	106	17.18	1,823
Scurry County (*) ..	4	16.00	64
Shackelford County	668	4.14	2,772
So. Vernon Dist. ..	340	40.56	13,793
Stephens County	1,285	10.54	13,545
Throckmorton Co. ..	6	26.33	158
Upton County	2	22.00	44
Wheeler County ..	6	14.50	87
Wortham	293	35.29	10,340
Young County	589	11.22	6,613
Total 19,087		13.40	255,740

(*) Producing low gravity crude.

Daily average production per well during the month of March, 1926, in the Texas Gulf Coast fields:

Fields—	Number Wells	Average Per Well	Field Average
Barbers Hill	2	50.00	100
Batson	284	4.75	1,350
Big Creek	14	67.85	950
Blue Ridge	14	37.50	525
Boling	7	751.71	5,362
Damon Mound	28	30.35	850
Dayton	7	11.43	80
Goose Creek	238	41.38	9,945
High Island	5	13.00	65
Hockley	2	6.00	12
Hull	302	53.77	16,200
Humble	266	18.23	4,850
Markham	14	6.42	90
Nacogdoches	18	1.02	20
Nash	1	300.00	300
Orange	129	90.69	11,715
Orchard	1	150.00	150
Pierce Junction	10	119.50	1,195
Saratoga	368	3.39	1,250
Sour Lake	305	14.09	4,300
South Liberty	111	55.13	6,120
Spindletop	121	19.65	2,378
West Columbia	111	84.09	9,250
Total	2,358	32.67	77,057

Daily average production per well during the month of March, 1926, in the miscellaneous fields of Central and South Texas:

Fields—	Number Wells	Average Per Well	Field Average
Brenham	11	8.55	94
Callaham	3	322.00	966
Falls County	3	26.66	80
Laredo-Mirando Dist. .	163	56.75	8,449
Somerset	235	9.73	2,287
Total	415	28.61	11,876

SUMMARY

North, Central and West Texas 19,087		13.40	255,740
Gulf Coast	2,358	32.67	77,057
Miscellaneous Texas .	415	28.61	11,876
Total 21,860		15.76	344,673

Building Bridge Across Canadian River

Amarillo, Texas.—As the first move toward a remedy for the very unsatisfactory conditions attendant upon the movement of traffic between the north and southern extremities of the Panhandle oil fields across the Canadian river, the Hutchinson County officials have announced the completion of a contract with the Austin Bridge Company, of Dallas, whereby that company is to construct a toll bridge of 2476 feet in length across the Canadian at Dixon Point, as the ford, sole means of crossing the stream at the present in this county, is known.

The bridge is to be ready to receive traffic by 90 days from the start of construction work and is to have a capacity of 15 tons. Standard tolls will be charged.

The need of such a bridge was brought out in a recent meeting with Commissioner John Cage of the State Highway Commission here attended by some 200 oil men, county officials and others interested. However the oil men are demanding immediate relief for the condition and the bridge is declared to be an effort on the part of the county to give the temporary relief needed and permit oil operations in the territory to go forwards without undue hindrance.

Lee Scott, vice-president, F. A. Mallonee, general production superintendent, and T. A. Morgan, manager of pipe lines for the White Eagle Oil & Refining Company with headquarters at Wichita, Kansas, spent three days last week inspecting the holdings of the company in the Hutchinson County section of the Texas Panhandle, where one well flowing 410 barrels natural has been completed, with six additional tests underway.

Colombia Pipe Line Nearing Completion

Movements of crude are expected to start during the early part of May

By Wallace Davis
Staff Representative

Houston, Texas.—The lack of transportation facilities, which has long held up development of production in the proven areas in the Republic of Colombia, South America, is being alleviated shortly when the first crude will be turned into the initial unit of the 350-mile 10-inch pipe line running from the Atlantic seaport at Mamonal, near Cartagena, to the Infantas field. The line will probably be delivering crude early in May, according to Dr. Santiago Rozo, minister of industries in Colombia, who called at Houston for a visit of a week recently while on a tour of the southern sections of the United States. The line was laid by the Andian National Corporation, Ltd., of Toronto, Canada.

$15,000,000 Spent

Completion of the line, which will, plans show, be extended in the future to other producing areas of the nearby fields, will involve an expenditure of roughly $15,000,000, and will supply producers a delivery capacity of 10,800,000 barrels of crude annually.

Starting at Mamonal, about 10 miles across the bay from Cartagena, the line runs across the Magdalena River at San Augustin besides making other deep water crossings at El Dique, Rio Cesar, Rio Lebrija and Rio Sogamoso.

A glance into the actual ground workings which have made this master pipe line project a reality after years of visualization on the part of Colombian operators finds it no doubt representative of any phase of the big development going on in regions where the industry is just emerging from its infancy. With pencil and paper the system of building was laid out with clean swipes to perfectness; yet the methods were crude. Now the practically completed line is the result of one of the best planned pieces of development anywhere in the petroleum world.

Pipe for the line was delivered by U. S. companies by boat at Cartagena and carried by rail to Calamar, on the Magdalena River. From Calamar it was transported by barge to the various convenient points of delivery. From these points pipe and other equipment for the line was delivered by wagons, trucks and tractor along the line. Spaces had to be cleared for depositing yards for the pipe since the river bed is lined on both sides with dense jungles. Roads had to be cut through the steep banks of the river by almost primitive methods for the pipe to be skidded from the barges up to the depositing yards. Much of the pipe was carried up by hand by hundreds of men with the aid of tractors. Some 60,000 tons of material is the amount named to have been used in the project.

In order to get the best possible efficiency from labor the Andian Corporation brought approximately 150 men from the United States and Mexico to head the construction work. It was through these men, who were familiar with pipe line work, that the Colombian natives were taught to handle the jobs. As the line is nearing completion the natives are also being taught to maintain and operate the system inasmuch as foreign skilled labor is not always available and stable. In their present work the natives apparently no longer uphold the early belief existing among the Colombians that oil should not be drained from the earth in that it had a specific purpose—to oil the stones. Such a belief is said to have prevailed among the South Americans generally at the time Diego Garcia, a priest, discovered the first oil in Colombia. The discovery is reputed to have created much excitement among the natives, and the name "stone oil" was given the crude.

Tankage at present consists of eleven 80,000-barrel and five 55,000-barrel tanks at Mamonal, at the seaboard end of the line, with two 30,000 barrel tanks at each pump station.

Due to the lack of a deep harbor at Cartagena many barges and launches were necessary to serve in unloading the pipe at this point. The bay does not reach a depth of 40 feet for a distance of about 600 feet away from the dock, making it impossible for large ocean going steamers to come in nearer than this point. That some modern methods were used in the project is seen by the company's placing in service of a hydroplane specially designed for this character of country and climate.

Tom L. Taggart, for the second time in order, has walked away with honors at the annual golf tournament of the Pacific Gasoline Company, winning a beautiful trophy in the form of a silver cigarette stand surmounted with a silver golf ball and golf club. The trophy was put up by General Superintendent R. E. Beckley. The tournament was held March 28th at Rio Hondo Country Club.

Active Concerns

Among the important problems facing the Andian Corporation during the work on the line, living conditions of the men probably stood at the top. Temporary base hospitals were established along the line at convenient intervals, and a doctor with assistants placed with each outfit. Little sickness, considering the conditions, was reported during the long period of work. Plans are now under way to establish a permanent base hospital near Calamar.

Among the most active concerns operating in the republic are the Colombian Gulf Company, Tropical Oil Company, Colombian Syndicate, Granada Oil Corporation, Transcontinental Oil Company, Colombian Oil Fields, Ltd., Latin American Petroleum Corporation of Colombia, Leonard Exploration Company, La Compania Colombiana de Petroleos, Lobitos Oil Field Company and the Sociedad de Bataache Petroleos Maatchappy, besides the Andian.

A refinery of 2000 barrels daily capacity has been built at Barranca Bermeja, about 400 miles from the coast and 300 miles from Bogota, the capital of the republic, which is capable of supplying the entire country with gasoline, kerosene, lubricants and other oils, is an example of some of the past development in Colombia.

The Colombian oil reserves have been divided into seven zones covering approximately 34,000 square miles. These zones outline different sections of the republic according to location and convenience of transportation as follows: First, the strip of land along the Caribbean coast from Rio Hacha to the Gulf of Uraba; second, the northern part of Norte del Santander; third, the east bank of Magdalena River in Santander; fourth, the region between Sinu and San Jorge on the slopes of the Central Cordillera Mountains; fifth, the eastern parts of Antioquia and Tolima on the western banks of the Magadalena River; sixth, west of the city of Popoyan, in El Cauca and between the towns of Quibdo and Cali; and seventh, the plains of San Martin and Casanare. It is over this territory that most of the research for the past several years has been done, according to Dr. Rozo.

Birdseye view of the topography surrounding the Cook ranch discovery well, with the well situated at the head of the draw

West Texas Shallow Field Starts Drilling Activity

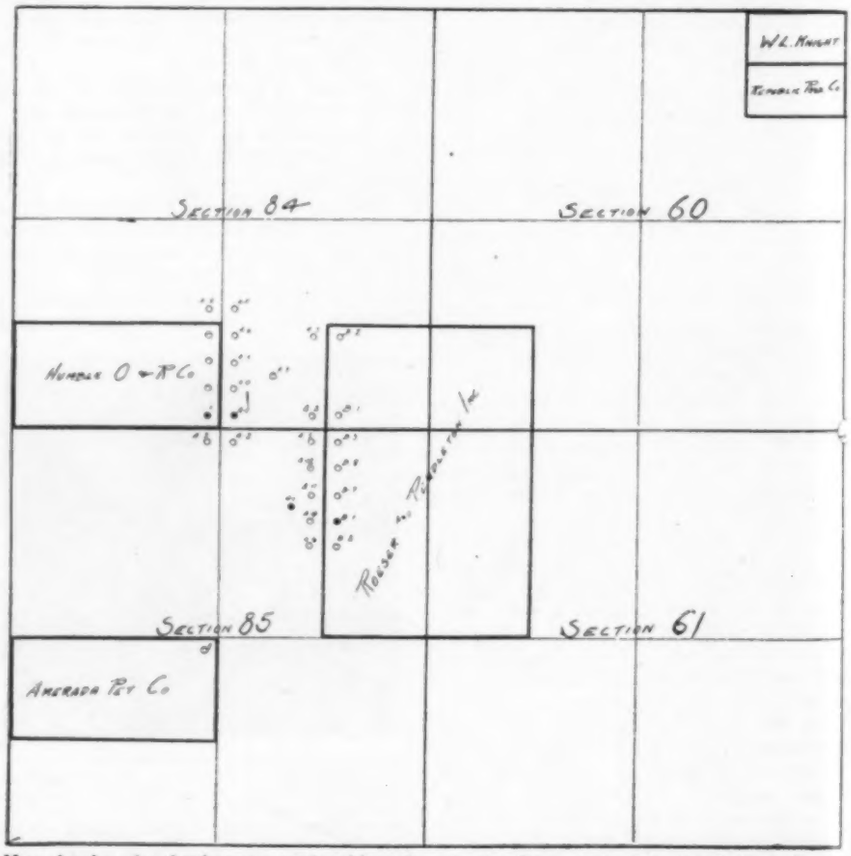
By H. H. King
Staff Representative

Fort Worth, Texas. — The Cook Ranch shallow field in Shackelford County is proving to be the most prolific oil strike made this year in Central West Texas, and is producing 2530 barrels of 40 gravity crude daily by natural flow from true oil sand encountered around 1300 feet. The field has four wells flowing at an average rate of 632 barrels daily, with 24 additional tests under way, or scheduled for immediate drilling. Two of the producers have drilled 15 feet into the oil sand, and the total thickness of this pay horizon has not been determined.

The field showed evidence of being a prolific area with the drilling in of the discovery well, which flowed 1000 barrels natural on February 18, from four feet of oil sand at a total depth of 1231 feet. This discovery was made by Roeser-Pendleton, Inc., on a large block of leases held jointly with the Marland Oil Company of Texas. The high initial production of the first well was made through 8¼-inch casing, with considerable open hole. The total production of the discovery well during the first nine weeks ending last Thursday amounted to 32,193 barrels, being a daily average production of 511 barrels for the period. The well was holding at 570 barrels daily at last reports. The gross value of the oil produced by this well during the first nine weeks amounted to slightly more than $75,000, which is calculated on the basis of all the oil testing 40 gravity when run by Humble Pipe Line Company.

Except for single 80-acre leases held by Humble Oil and Refining Company and the Amerada Petroleum Corporation, all close-in acreage around the Cook Ranch field is controlled by Roeser-Pendleton, Inc., and the Marland Oil Company. Humble's tract is located in the south half of the southwest quarter of section 84, and has one flowing well, with four additional tests under way. Amerada acquired the north half of the southwest quarter of section 85 shortly after the discovery well came in, paying $400 per acre cash and $100 per acre additional in oil, and is scheduled to have its first test down to the pay level late this week.

Approximately 18,000 acres are held under lease on the Cook Ranch in a solid block by Roeser-Pendleton, Inc., and Marland Oil Company. This acreage was acquired late last year for the drilling of a number of tests at scattered points over the ranch by Roeser-Pendleton, Inc., and Marland bought an interest in the block before exploration work began. Roeser-Pendleton, Inc., have exclusive charge of the development of the acreage held jointly with Marland, and Chas. F. Roeser is personally supervising the field work. Chas. Roeser and Tol T. Pendleton, who operate as Roeser-Pendleton, Inc., have operated in the Central West Texas district continually since the early development of the old Ranger



Map showing the development work taking place in the Cook ranch field, Shackelford County, with Roeser-Pendleton, Inc. and Marland Oil Company of Texas in control of all the average not designated by ownership

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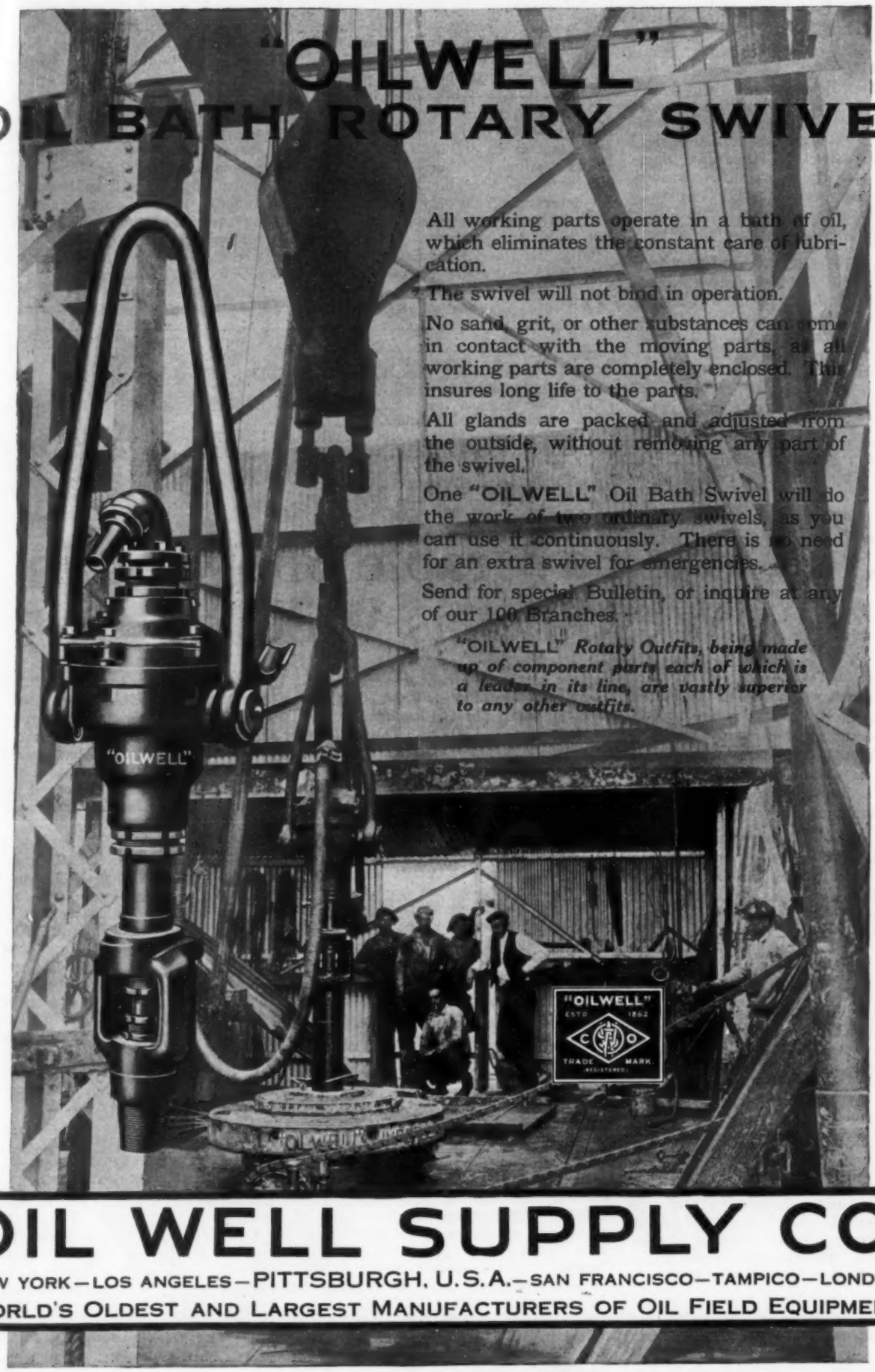

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and Breckenridge fields, and are well known elsewhere in the Mid-Continent and Coastal fields.

The cost of completing wells in the Cook Ranch field average about $6000, and drilling machines are more generally used, although Roeser-Pendleton, Inc., are starting several cabletool rigs, with steel derricks. Three and sometimes four strings of casing are needed in drilling the wells, and all the pipe is pulled after production is obtained, except the inside string resting on the top of the sand pay. Humble Pipe Line Company built 14 miles of 6-inch line from the Sedwick field to serve the Cook Ranch discovery well shortly after its completion, and handled the crude in tank cars via the Katy Railroad while the extension line was being constructed. Marland Pipe Line Company, subsidiary of Marland Oil Company, started construction work last week on a field gathering system and tank car loading rack to move its portion of the production via tank cars to Texas City, where the crude will be loaded in tankers for Atlantic Coast delivery.

Roeser-Pendleton, Inc.'s Cook 1-B, located east of the discovery well and on acreage that Marland does not hold an interest in, established a high record for initial flow April 19 when it made 1760 barrels from 15 feet of sand at a total depth of 1235 feet, and continues to flow 1360 barrels daily. The productive area in the field is yet to be determined, as only one test has drilled through the pay horizon without making a producer. Roeser-Pendleton, Inc., and Marland's Cook 3-A, section 85, and a south offset to Humble's producer, registered a small show of oil in regular sand horizon at 1245 feet, and is now drilling ahead at 1485 feet to try for a lower producing horizon. The Moran district in Shackelford County is the oldest shallow oil producing area in Central West Texas, being made up of a series of small pools separated by barren spots, and the Cook Ranch field is a continuation of the production trend extending to the northwest of the Moran district. Wildcat operations have been greatly stimulated in the north and central west portion of the county since the development of the Cook Ranch field has resulted in the completion of flowing wells of attractive size.

Completion data on the producing wells in the Cook Ranch field:

Company—	Elevation	Oil Pay	Date Comp.	Initial Prod.	Present Prod.
Humble Oil & Ref. Co. Cook 1	1702	1344-1351	3-31-26	600	275
Roeser-Pendleton, Inc., Cook 1-B (Sec. 85)	1607	1220-1235	4-19-26	1,760	1,360
Roeser-Pendleton & Marland Oil Co., Cook 1-A (Sec. 85)	1617	1227-1231	2-18-26	1,000	570
Cook 1-A (Sec. 84)	1658	1293-1308	4- 4-26	600	325
Totals				3,960	2,530

Gulf Has Favorable Showing in West Texas Wildcat

San Angelo, Texas.—The Gulf Production Company's wildcat test on the Hutchings Joint Stock Association fee land in the northeastern part of Ward County developed a good show of gas with live oil in evidence while drilling within a few feet of the depth at which the hole was to have been abandoned.

The test was scheduled to go to 4500 feet, and a good show of gas developed while drilling in gray lime at 4495 feet with 3000 feet of water in the hole. The gas increased slightly in volume when the hole was carried to 4502 feet, and the show of live oil followed after the test was deepened to 4506 feet (cable measurements).

This test is located in the northeast corner of section 47, block "N," and about 3½ miles south of Monahan. It logged the top of the salt at 825 feet and top of the big lime at 3025 feet, with a surface elevation of 2609 feet. Sufficient gas is coming through the heavy column of sulphur water in the hole to burn when ignited, and early this week the crew was trying to under ream to lower 5-3/16 inch casing from 4440 feet to the top of the gas pay and make a test. This wildcat is in line with the general trend of production extending from Crockett County, Texas along the east side of the Pecos River to the Artesia field, New Mexico.

Magnolia Petroleum Company et al's wildcat oil producer on University land in the northeastern part of Crane County partially overcame its water troubles while pumping at irregular intervals during the past week after having made 145 barrels of 30.7 gravity oil and 60 barrels water during the first 24 hour gauge from saturated lime at 3040 feet. This well was reported last week as having pumped mostly water during the first few hours on the pump. The well made 190 barrels of oil and no water during the second 24 hour gauge, and again developed water trouble. Tubing and rods were pulled late last week, and Monday the well pumped off after making 40 barrels oil and no water. The hole is open from the 2450-foot level, and about 35 feet of cavings have accumulated in the hole while trying to pump. A string of casing will be run to the top of the pay before further testing is made of the production.

F. P. Zoch and Marland Oil Company's Keith-Hughes 1, located in section 92 and on the east line of Crane County, pumped 102 barrels of oil in eight hours last Friday, and after being down 10 hours the well pumped 110 barrels the next eight hours. This well was making 77 barrels daily on the pump early this week from saturated lime at 2564-70 feet, and Marland Pipe Line Company is arranging to market the production by making tank car shipments to the Gulf Coast. The Marland Oil Company has three wells in process of completion in the Hurdle district, Upton County. Marland's Benton 1, located in the southwest corner of the Julia Prater survey No. 1, is showing oil in brown lime at 2312 feet, with a surface elevation of 2495 feet, after having failed to make a producer in the 2045-foot lime pay. Marland's Burleson 2 is preparing to swab with 2200 feet oil in hole from saturated lime at 2180-2220 feet; Burleson 3, which is credited with being the highest test on structure in the Hurdle district, swabbed 176 barrels early this week from saturated lime at 2111 to 2140 feet. The latter test has a surface elevation of 2570 feet, and logged the top of the salt at 535 feet, and the top of the big lime at 2045 feet.

The Texas Company's J. S. Todd 1, located in section 50, G. C. & S. F. survey, Crockett County, has been shut in as a 1,000,000 cubic foot gasser with a rock pressure of 60 pounds after being shot twice, with a total depth of 2102 feet. This test bailed small quantities of 30 gravity oil in sand at 1900-10 feet, but failed to show an increase in oil production when shot with 40 quarts last week. The second shot was placed in gas sand at 1695-1705 feet. This test is credited with having drilled through 75 feet of hard white sand, and is one of the few wildcats in West Texas that have encountered thick bodies of sand.

Two offset tests are being started in Howard County around the wildcat oil producer completed several weeks ago by the Owen-Sloan Oil Corporation on the Otis Chalk ranch, section 113, block 29, in sand pay at 1577-86 feet. The owners of the discovery well, which flowed 70 barrels 30.1 gravity oil, are starting an offset to the south, while Magnolia is rigging up on the east. Two additional tests are being started in nearby sections. Marland Pipe Line Company is making arrangements to build a gathering line to purchase the oil produced by the Chalk discovery well.

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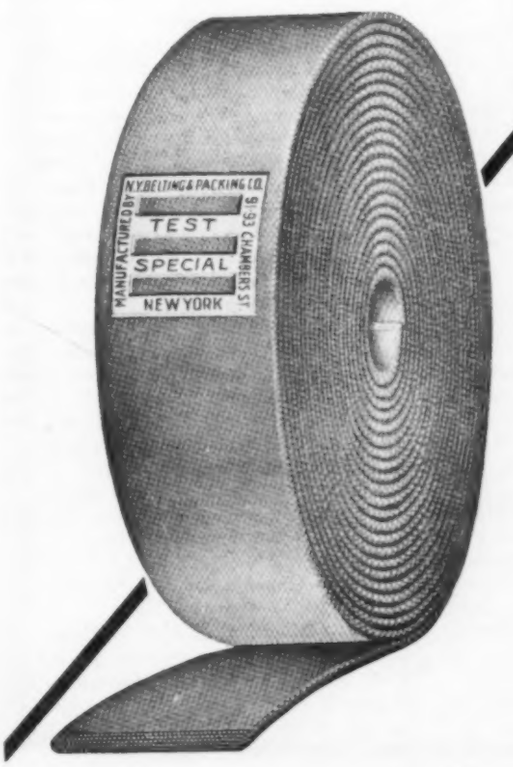

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Phillips Has Good Well For Panhandle

Amarillo, Texas. — Phillips Petroleum Company et al's Johnson 1, located in tract 7, Mary Whitley survey and about one-half mile from the nearest production set a new record for natural flow in Hutchinson County during the past week when it made 1600 barrels 39.9 gravity oil during the first 24 hours and 1400 barrels during the second 24 hour gauge from regular sandy-lime pay at 2980-82 feet. This well logged the top of the lime at 2205 feet, with a surface elevation of 3067 feet. Phillips' production and that held jointly with other operators amounted to 1455 barrels daily average from eight wells during the past week. The production of the Johnson well was not included.

Hutchinson County continues to expand in actual field operations, and at the close of the past week 117 tests were actively underway or in process of completion; 41 rigs and derricks; eleven locations; and seven tests shut down, making a total of 176 operations listed on field reports. The county is credited with having maintained a daily average production of 10,650 barrels from 56 wells during the past week, being an average daily yield of 190 barrels per well. The Pattison-Lenix Oil Company's Smith 1, which was reported last week as having made 5800 barrels after big shot of nitro in regular sandy-lime pay, averaged 2150 barrels daily for the week.

The return of warmer weather in the Panhandle district has greatly relieved the congestion of crude in the Hutchinson and Carson fields, as the pipe line capacity is greatly retarded when the temperature drops to 50 degrees, or lower and causes the crude to congeal when exposed. Additional tankage is being erected by producers and crude purchasing agencies, and a number of the 55,000 barrel tanks will be available for storing oil in the field shortly.

Roxana Petroleum Corporation's Smith 1, Section 14, Hutchinson County, has been deepened and shot with 200 quarts of nitro at 2897-2975 feet, and flowed 470 barrels during the first 24 hours. This well was completed last November swabbing 175 barrels daily. J. B. Dunnigan et al's Smith 1, section 13, flowed 1000 barrels during the first 24 hour gauge after shot of 300 quarts at 2938-3026 feet, but has since settled to 300 barrels daily. Smith & Bynum's Smith 1, J. A. Whittenburg 1, Section 12, is preparing to plug back from 2971 to 2960 feet account of bottom hole water showing. This well flowed 175 barrels daily.

The Texas Company's W. J. Brown 1, located in section 137, block 3, Gray County, and about half way between Pampa and Kings Mill, was shot with 530 quarts of nitro late last week at 3090-3255 feet. The hole bridged after the shot, and when this bridge was drilled out the well flowed about 10 minutes over the crown block. The oil tests 37 gravity. This well is estimated good for 150 to 200 barrels when placed on the pump. It was drilled in record time, having been started early last month. The well has a surface elevation of 3269 feet. The nearest production to this producer is Empire's Heithott 1, section 152, being rated at 15 barrels daily after several shots at a total depth of 3258 feet. Marland Oil Company's Burnett 1-B, located in section 101, and due east of production in Carson County, developed a small show of oil in granite wash pay at 2935 feet, which depth is 221 feet above sea level, but failed to produce when tested. Drilling was underway early this week at 3025 feet.

Consolidates Offices For North Texas Area

Fort Worth, Texas.—The consolidation of the entire activities of The Texas Company in the North Central Texas division under one roof at Fort Worth was underway early this week. Office space has been obtained on the ninth and tenth floors of the W. T. Waggoner building to house the production, geological and land departments, which have heretofore been located at Cisco, Texas, and also the legal, refining and natural gas departments, while The Texas Pipe Line Company's division headquarters have been located in the W. T. Waggoner building for a number of years.

L. E. Barrows, division manager and general superintendent of production, D. O. Bayless, head of the land department, and A. Bruyere, head of the geological department, began moving their office staff and equipment from Cisco early this week. A field office will be retained at Cisco by The Texas Company. In connection with the grouping of the various divisions of The Texas Company into one office at Fort Worth, the natural gas department, which has formerly been operated separately with headquarters at Fort Worth under the direction of M. W. Bahan, has been merged with the production department, and is under the direct supervision of Barrows. Judge H. S. Garrett is at the head of the legal departmnet of The Texas Company in the North Central Texas division, and A. A. Mulkin represents the refining division. F. L. Minkwitz is chief clerk of the production department.

J. B. Haden is superintendent of The Texas Pipe Line Company, with jurisdiction over all lines operated by the company in the Mexia-Corsicana district and all the Central West Texas fields centering around the Ranger-Breckenridge district, as well as in West Texas.

Gulf Officials Meet At Fort Worth Office

Fort Worth, Texas.—Executive officers of the Gulf Production Company, Gulf Refining Company and the Gypsy Oil Company met in conference here Monday and Tuesday with officials from the Pittsburgh headquarters of the Gulf Oil Corporation.

The meeting was attended by Underwood Nazro, second vice-president, and Walter B. Pyron, third vice-president of the Gulf Production Company, Houston; E. C. Bothwell, assistant to F. A. Leovy, first vice-president of the Gulf Production Company, Pittsburgh; Henry McGraw, second vice-president, C. P. Dimit, general production superintendent, W. B. Wilson, chief geologist, and Frank Bridges, head of the land and scouting department, all with the Gypsy Oil Company with headquarters at Tulsa; and M. O. Rife, general production superintendent in the Louisiana-Arkansas district for the Gulf Refining Company with offices at Shreveport. F. J. Adams, general agent for the Gulf Production Company in the North Texas district, H. A. Melat, general superintendent of production, and Ben C. Belt, chief geologist, all of Fort Worth, also attended the conference.

Safety Council Meets

Houston, Texas. — Arrangements have been made by E. B. Wood, South Texas director of the Petroleum Safety Council of the Mid-Continent Oil and Gas Association, for a series of foremen's safety meetings to be held in the Gulf Coast when better safety methods will be discussed from different angles to give the foremen in varicus lines of the industry a better idea of caring for their employes. The first meet was held Thursday night at Port Arthur under the direction of Ray E. Miller, safety director of the council. Other meetings will be held Friday night at Beaumont, Monday night at Hull, and Tuesday night at Goose Creek, according to Mr. Wood.

Randado Basin Pool Coming To Front With Shallow Pay

Houston, Texas.—Randado Basin pool, southernmost production in the Mirando district and approximately 26 miles to the south of Laredo, is fast coming to the fore in importance with comparatively big production from an unusually shallow depth. The No. 3 well of the Houston Gulf Gas Company, located on Block 11, Survey 291, Jim Hogg County, attracted attention of Southwest Texas operators April 23 when it began producing 1200 barrels of oil and 35,000,000 feet of gas from a 1258-69 foot sand.

The Houston Gulf Gas Company is heading the play in this pool with three producers and 10 locations, five of which are now being drilled. The No. 1 of the company made a 100-barrel well and the No. 2 an 800-barrel well from practically the same depth as the last producer. The acreage from which this production is coming was taken by the Houston Gulf for the purpose of gas production to supply their main line running from Refugio County to Houston and San Antonio.

C. N. D'Amico of the Marland Oil Company of Texas scouting department at the Houston headquarters, has departed for Shreveport, La., accompanied by his wife, where he will spend a vacation of two weeks.

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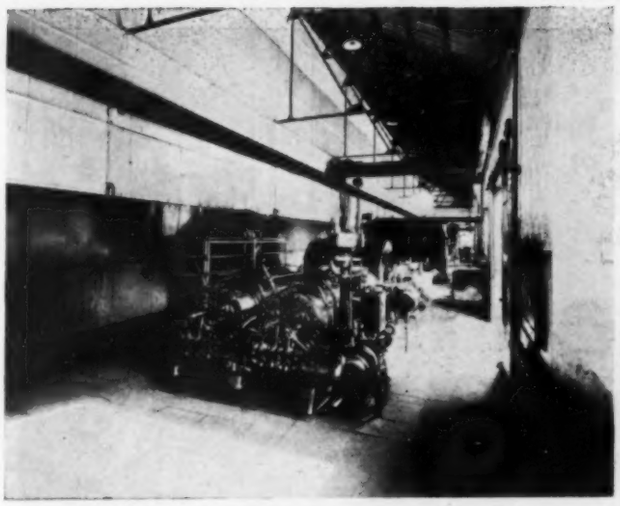
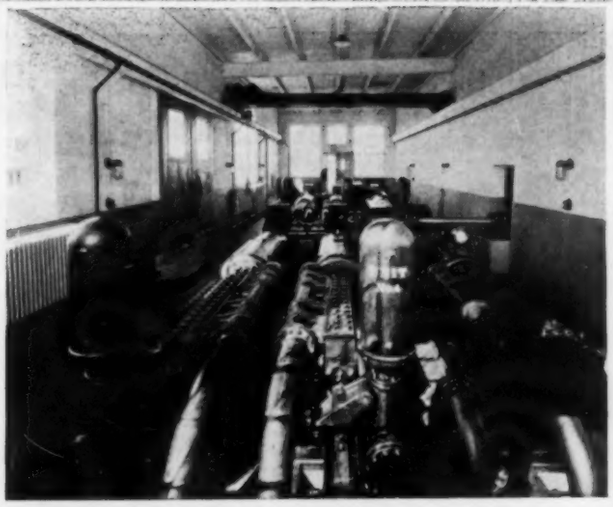


An installation of a horizontal type Diesel Engine for pipe line work.



Pump side of station. Engines are located on the other side of right wall.

Diesel Engines for Pipe Line Power

Mid-Continent M. E.'s discuss Diesel engines for pipe line power at Power Conference in Tulsa

By Roye Munsell
Staff Representative

TULSA, Oklahoma. — Diesel engines for power at pipe line pump stations in the Mid-Continent are now being widely used and it seems likely that in the near future other power plants will almost entirely disappear in their favor.

A number of factors are responsible for this general changeover to Diesel engines for driving pipe line pumps.

According to Fred Thilenius, Assistant Mechanical Engineer, Prairie Pipe Line Company, who presented a paper on Diesel engines at a session of the power conference of the Mid-Continent section of the A. S. M. E., the adoption of Diesel engines in the past has been due primarily to their economy and efficiency as a source of power.

Mr. Thilenius is his paper entitled "Diesel Engines for Pipe Line Power," gave the findings of some investigations which he made relative to the comparative costs of operation of the Diesel engine and the steam engine for pipe line pump operation.

Mr. Thilenius' figures showed that the maintenance cost of the Diesel engine is slightly higher than the same cost for a steam engine, but the fuel saved by using Diesel engine power more than offsets a greater maintenance cost.

According to Mr. Thilenius, a Diesel engine uses about one pound less fuel oil per horse power as compared with a steam power plant for running pipe line pumps.

Such comparative factors as first cost, interest on investment and depreciation were found to be approximately the same for both.

The comparatively high efficiency of the Diesel engine power plant is generally recognized. The direct utilization of thermal power by the Diesel engine for driving machinery is a distinct engineering advance.

The oil industry, however, met with many problems in the adaptation of Diesel engines to pipe line pump conditions. Some have been solved and some have not.

Immensely more satisfaction has been gotten out of the new type Diesels than was obtained from the old type Diesels and semi-Diesels first used.

Although the first Diesel engines were not installed at pump stations until about 1913, or very widely used until several years later, it is a far cry from those first oil burning engines to the present ones now being employed.

The old engines were admittedly crude, and sometimes of faulty design. Albeit, they indicated that the engines, such as they were, could be used exceedingly well.

The recent improvements in oil engines have made them more economical and, especially, more dependable. The present engines to be had, are, indeed, good products of the engineering arts.

Probably the most persistent, yet least recognized, source of trouble with Diesel engines has been, and sometimes still is, the fact that operators are still thinking in terms of the replaced steam engines.

One-time steam engine engineers in most cases become Diesel engine engineers when the latter are installed. Habits are easy to acquire but exceedingly hard to get away from when once fixed, as it is well known. A Diesel engine has peculiarities all its own and to get it to operate like the engine that it is, it must be treated like the engine that it is.

Not in all cases, to be sure, but in some cases it has been found that a person who has been brought up, if you please, with Diesel engines makes the most desirable operating engineers.

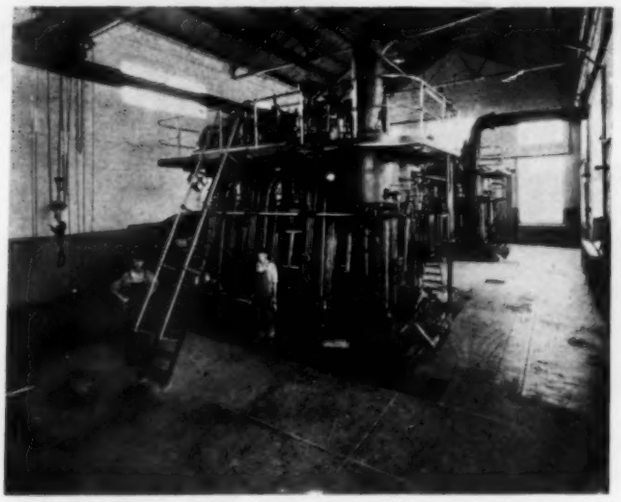
"Another "carry over" from the previous practice of using steam engines which makes for trouble with Diesel engines is the matter of lubrication. The cylinder walls of the oil burning engine require more and a better grade of oil. Too much stress on adequate and proper lubrication can scarcely be made.

Furthermore, the old practice of merely filtering lubricating oil is not good when a Diesel engine is used. The screens do not move the small particles of carbon very well and, contrary to some opinion, suspended carbon is to be avoided rather than desired, or merely disregarded.

The practice at some stations where Diesel engines are used for pumping is to load them to their rated capacity. Investigations show, however, that the load put on an engine by a pipe line pump is very different from that found in most other industrial uses.

At pumping stations, due to the action of the pumps, the load is "jerky."

Showing method of connecting pumps and engines and arrangement of Diesel equipped stations.



One of the large type Diesel Engines Used in the Mid-Continent for Driving pipe line pumps.

At one point in the cycle it is very heavy and at another it is much lower. In selecting an engine to drive a certain pump, the tendency is to consider the average of these high and low loads which will be placed on the engine.

If this is the practice, it is evident that there will be periods when the engine will be actually greatly overloaded. The practice should be, therefore, to select an engine of such a capacity that at no moment of its operation will the load imposed upon it be excessive. It has been found in some cases that a 350 H. P. engine will operate more efficiently and economically on installations where 300 H. P. under the ordinary load would have been adequate.

The "jerks" encountered in pipe line work not only aggravate the engine but, under common operating conditions, cause increased wear on parts, principally crankshaft bearing and cylinder walls.

It seems that the pump jerks tend to apply a thrust on the crank shaft. This forward movement of the member throws the lower end of the connecting rod out of position, thereby causing excessive wear between the piston and cylinder wall.

It has been found that making each main bearing also a thrust bearing has in some cases minimized such trouble.

The placing of an air chamber in the delivery line close to the pump reduces the jerks and cuts down trouble materially.

An increased pump station fire hazard has come about with the use of Diesel engines by virtue of the fact that power plant and pumps are necessarily installed close together. Without some sort of a shield or fire wall placed between the two, fires that might be caused by crude oil from the pumps, getting on hot parts of the engine are a constant menace.

At least one case is on record where crude oil sprayed by the pumps on the engines was sucked in through the valve engine was sucked in through the valve

A partition of some sort between the Diesel engines and the pumps is a necessary safety measure. An affair constructed from ordinary roofing iron costs the least probably, but serves the purpose admirably.

Where the engine-pump units have been installed in the "interlocking" position to utilize space better, shielding is very difficult and interferes greatly with easy operation, of course.

In the matter of size of engines being used, there is a tendency now toward larger units. At one time many small units were installed at a particular station. With that sort of an installation one or more units were shut down when the station was to be run at less than full capacity.

For some time that method was believed to be the best practice. In many ways there is still much to be said for it.

On the other hand, the advantages accruing from the use of larger units cannot be disregarded. It has even been found that a few large engines get better care than many small engines.

With large engines the fluid delivery into the lines is decreased by slowing down one or all of the engines, depending upon operating conditions and method of hook up.

In any case, emergencies are provided for by the installation of one or more auxiliary units. In case an engine fails or greater fluid delivery is necessary, the auxilliary unit is cut in and started up.

Some idea of the extent of the use of the Diesel engine at pump stations by pipe line operators can be gotten from the fact seven of the nine major companies have installations totalling more than 200,000 horse power. It was not until about 1913 when the first oil burning engine was installed. The majority of the present engines now being used were probably installed in the three or four year period which commenced in 1917.

In the east, and also on the Pacific coast, however, the Diesel engine is not widely used for pipe line work.

Roxana Starts Test Near Shallow Brazoria Find

Houston, Texas.—Roxana Petroleum Corporation has spudded its Kropp No. 2 on a location 1041 feet south of the No. 1 in Brazoria County, representing the first new development on the Clemens dome since the finding of 23 gravity crude in the No. 1 at 537 feet.

The No. 1 wildcat test proved the presence of oil at this point after the torsion balance had outlined the dome, and 300 feet of 23 gravity crude stood in the hole from a sand at 537-543 feet. Roxana failed to make the well flow by running 2-inch tubing and then bailing for two days, and took the hole to a total depth of 590 feet. At three levels encouraging sands were tested with no result. The cap rock was encountered at around 590 feet, when the hole was plugged back to 578 feet and bailed in a sand with another failure.

A bad fishing job at 4518 feet in Roxana's Clemens No. 1, 4507 feet southwest of the Kropp No. 1, caused the company to give this test up last week. The Clemens test was apparently too far off the edge of the dome to strike production.

The Allen No. 2 of Roxana, drilling off the Allen dome, five miles south of the Clemens dome, has been taken to 3518 feet and is starting deeper with a heavy steam rig. This location is 1714 feet from the No. 1 Allen, which hit the cap rock at 822 feet, drilling from torsion balance discoveries.

Balance Sheet for Marine Corporation

Los Angeles, Cal.—Net profits of the Marine Corporation for the year ending December 31, 1926, amounted to $794,079.81, as compared with $180,-220.96 for the preceding year, an increase of about 341 per cent, according to the recently issued annual report of President D. M. Smith.

Gross income for 1925 amounted to $2,762,104 as compared with $284,711 in 1924, an increase of $2,477,393. Of this income, $2,496,826 accrued from the sale of oil, $190,546 from gasoline and $74,732 from incidental sources. A total dividend disbursement of $807,970

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was made during 1925, representing a return of 23 per cent to stockholders.

The company produced and marketed 3,385,673 barrels of oil in 1925. Of this, the corporation's share amounted to 1,597,803 barrels, valued at $2,496,826.

According to the balance sheet, total assets of the company are $6,724,690, while current assets amount to $369,271, as against current liabilities totaling $321,666.

Officers of the Marine Corporation are D. M. Smith, president; J. R. McKinnie, vice president and general manager; Lyman R. McFie, vice president and treasurer; R. L. Mack, vice president; D. L. Mayhew, secretary and assistant treasurer; M. L. Marr, P. W. Wood and Grover Grady, assistant secretaries.

Engineers to Direct Petroleum Research for A. I. M. & M. E. in 1926

The engineers listed below comprise the National Committee, Petroleum Division of the American Institute of Mining and Metallurgical Engineers for 1926 as recently issued by the Institute.

The Petroleum Division of the A. I. M. & M. E. has been very active in petroleum research and has extensive plans for the coming year.

A. W. Ambrose	Production Engineer, Empire Companies	Bartlesville, Okla.
W. E. Badger	Vice-President, Illinois Pipe Line Company	Findlay, Ohio
Amos L. Beaty	Chairman of the Board, The Texas Company	New York City
R. D. Benson	Formerly Chairman of the Board, Tide Water Oil Company	New York City
A. D. Brokaw	Consulting Geologist, Brokaw, Dixon, Garner & McKee	New York City
Charles B. Buerger	General Manager, Gulf Refining Company	Pittsburgh, Pa.
D. S. Bushnell	(Vice-Chairman, Petroleum Division, A. I. M. E., for Transportation) President, Buckeye Pipe Line Company	New York City
E. P. Campbell	Production Engineer, Pure Oil Company	Tulsa, Okla.
E. M. Clark	Director, Standard of New Jersey	New York City
E. W. Clark	Vice-President, Union Oil Company	Los Angeles, Calif.
George S. Davison	President, American Society of Civil Engineers, and President, Gulf Refining Company	Pittsburgh, Pa.
E. L. DeGolyer	First Vice-President, A. I. M. & M. E., President, Amerada Pet. Corp.	New York City
T. G. Delbridge	Chief of Research Department, Atlantic Refining Company	Philadelphia, Pa.
H. C. Dickinson	U. S. Bureau of Standards	Washington, D. C.
Henry L. Doherty	Henry L. Doherty & Company	New York City
Gustav Egloff	Director of Research, Universal Oil Products Company	Chicago, Ill.
Robert S. Ellison	Vice-President, Midwest Refining Company	Casper, Wyo.
E. L. Estabrook	Production Engineer, Pan American Eastern Corporation	New York City
W. S. Farish	President, American Petroleum Institute and President, Humble Ref. Co.	Houston, Texas
Charles Fitzgerald	General Superintendent, Pure Oil Pipe Line Company	Dallas, Texas
F. Julius Fohs	(Chairman, Petroleum Division, A. I. M. E.) Vice-President, Humphreys Corporation	New York City
David M. Folsom	Assistant to President, General Petroleum Company	San Francisco, Calif.
H. R. Gallagher	Vice-President, Shell Company of California	San Francisco, Calif.
James H. Gardner	(Vice-Chairman, Petroleum Division, A. I. M. E., for Production) President, Gardner Petroleum Company	Tulsa, Okla.
Frank A. Herald	(Chairman, Mid-Continent Section, Petroleum Division, A. I. M. E.) Herald Brothers, Geologists	Tulsa, Okla.
H. H. Hill	Chief Petroleum Engineer, U. S. Department of Commerce	Washington, D. C.
R. C. Holmes	President, The Texas Company	New York City
A. E. Humphreys	President, Humphreys Corporation	Denver, Colo.
E. W. Isom	Vice-President Sinclair Refining Company	New York City
Joseph Jensen	(Chairman, Southern California Section, A. I. M. E., Petroleum Division) Geologist, Associated Oil Company	Los Angeles, Calif.
K. R. Kingsbury	President, Standard Oil Company of California	San Francisco, Calif.
C. H. Kountz	Vice-President, Prairie Pipe Line Company	Independence, Kans.
John Lovejoy	Vice-President, Amerada Petroleum Corporation	Tulsa, Okla.
A. C. McLaughlin	Vice-President, Associated Oil Company	San Francisco, Calif.
B. O. Mahaffey	(Vice-President, A. I. M. & M. E.) President, Silurian Oil Company	St. Louis, Mo.
Van H. Manning	Petroleum Securities Corporation	Forest Hills, L. I.
E. W. Marland	President, Marland Oil Company	Ponca City, Okla.
Walter Miller	General Manager, Marland Oil Company, Refining Department	Ponca City, Okla.
C. H. Osmond	(Vice-Chairman, Petroleum Division, A. I. M. E., for Refining) Consulting Petroleum Geologist	New York City
Thomas A. O'Donnell	Chairman of Board, California Petroleum Corporation	Los Angeles, Calif.
Charles L. Parmelee	Consulting Engineer	New York City
A. W. Peake	General Superintendent, Production Dept., Midwest Refining Company	Casper, Wyo.
J. Edgar Pew	Vice-President, The Sun Company	Dallas, Texas
Frank Phillips	President, Phillips Petroleum Company	Bartlesville, Okla.
Joseph E. Pogue	Vice-Chairman, Petroleum Division, A. I. M. E., for Economics) Consulting Engineer	New York City
Mark L. Requa	Mining Engineer	San Francisco, Calif.
Rear-Ad. H. H. Rousseau	Federal Building	Los Angeles, Calif.
Walt M. Small	(Representative Petroleum Division, Mexico) Chief Geologist, Cia Petrolera del Agwi, S. A.	Tampico, Mexico
George Otis Smith	Director, U. S. Geological Survey.	Washington, D. C.
J. W. Steele	Petroleum Engineer, U. S. Geological Survey	Casper, Wyo.
John R. Suman	Vice-President, Rio Bravo Oil Company	Houston, Texas
T. E. Swigart	(Vice-Chairman, Petroleum Division, A. I. M. E., for Production Engineering) Production Engineer, Shell Company of California.	Los Angeles, Calif.
W. C. Teagle	President, Standard Oil Company of New Jersey	New York City
F. M. Towl	President, Southern Pipe Line Company	New York City
M. M. Valerius	M. M. Valerius Company	Tulsa, Okla.
A. C. Veatch	President, Sinclair Exploration Company	New York City
F. H. Wickett	Chairman of the Board, Pan American Eastern Petroleum Corp.	New York City
C. B. Watson	Asst. to President, Pure Oil Company	Columbus, Ohio
C. P. Watson	Secretary, Petroleum Division, A. I. M. E.	New York City

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Effect of Closing In Production in the Coalinga Field

By V. H. Wilhelm,
Deputy Supervisor, District No. 5, California Chamber of Mines and Oil

THE attention of oil operators has been directed to the question of migration of oil to neighboring operating and competing areas from areas which have undergone, or may have to undergo, prolonged inactivity owing to unfavorable market conditions or other reasons. This question is of much importance, as the difference between profitable and unprofitable operation depends upon the correct interpretation of the data furnished by many "shut-down" areas.

The question is economic and involves many factors, the more important being the cost of storage, pipe lines, real estate and rights of way, interest on capital invested, and loss by evaporation and leakage. Offsetting these considerations are the possible, but unknown, losses by migration or drainage to neighboring and competing producing areas, which might result if underground storage were resorted to.

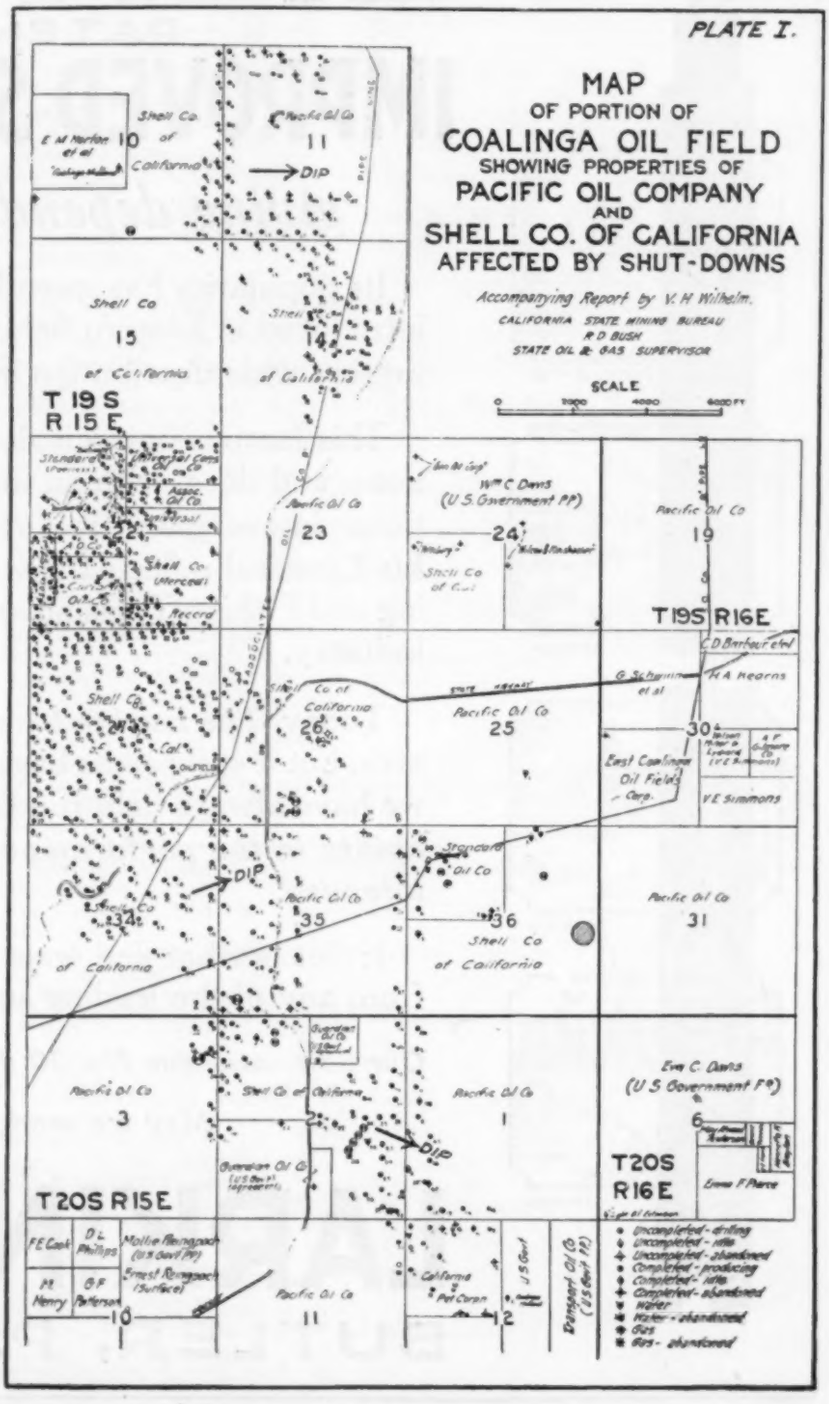
The following data and conclusions show that "shut-in" production in fields, such as the Coalinga field, is merely deferred production, a considerable proportion of which is recovered in the first few months after production is resumed, and without considerable migration to neighboring pumping wells. The conclusions drawn are not to be considered as applicable to fields of high pressure gas where gas is the predominating factor in the recovery of oil.

Cost of Storing Oil Above Ground

The storage of oil above ground is expensive for several reasons. Evaporation is a large factor, especially in the San Joaquin Valley during the hot dry summer months. Evaporation losses naturally vary with the type of storage used and the gravity of the oil. The minimum loss by evaporation for 26 gravity oil in the best type of sealed steel tanks in the Coalinga field is 3 per cent per year. Evaporation losses on 12-15 gravity oil is considerably less. In large earthen storage shrinkage of 26 gravity oil is as high as 14 per cent a year.

The cost of storage would naturally have to be charged off to the first cost of the oil, as there is no assurance that the tanks will be used a second time. The minimum cost of complete installation of earthen storage of large capacity is 35 cents a barrel. The best types of large steel tanks cost 60 cents a barrel. A large portion of the oil now in storage was placed in tanks during 1922 and 1923, during a period of great overproduction. Including the cost of storage and pipe lines, this oil represents a minimum outlay of $1.20 a barrel.

Maintaining this oil in storage is a considerable and constant expense. Adding taxes, interest on investment, evaporation losses, fire insurance, and maintenance, the cost of storing oil would be not less than 20 cents a barrel a year. Oil in storage at present may not be disposed of at a profit for many years, as the cost of storage will probably be greater than the possible increment in market price due to



A Test You Can Make Yourself

A quick test for determining the relative durability and rust-resisting qualities of various paints when used on steel, can be made in your own office. Take a small panel of rusty iron; brush off the rust; apply a coat of No. 5 Black or No. 6 Red Tnemec to one side, and a coat of any other paint you wish to the other side. Allow panel to dry thoroughly. Then allow it to stand in a tumbler of concentrated brine for 24 hours, and follow this with exposure to air and sunlight for 24 hours. Continue this process alternately and see for yourself how long each kind of paint protects the iron.

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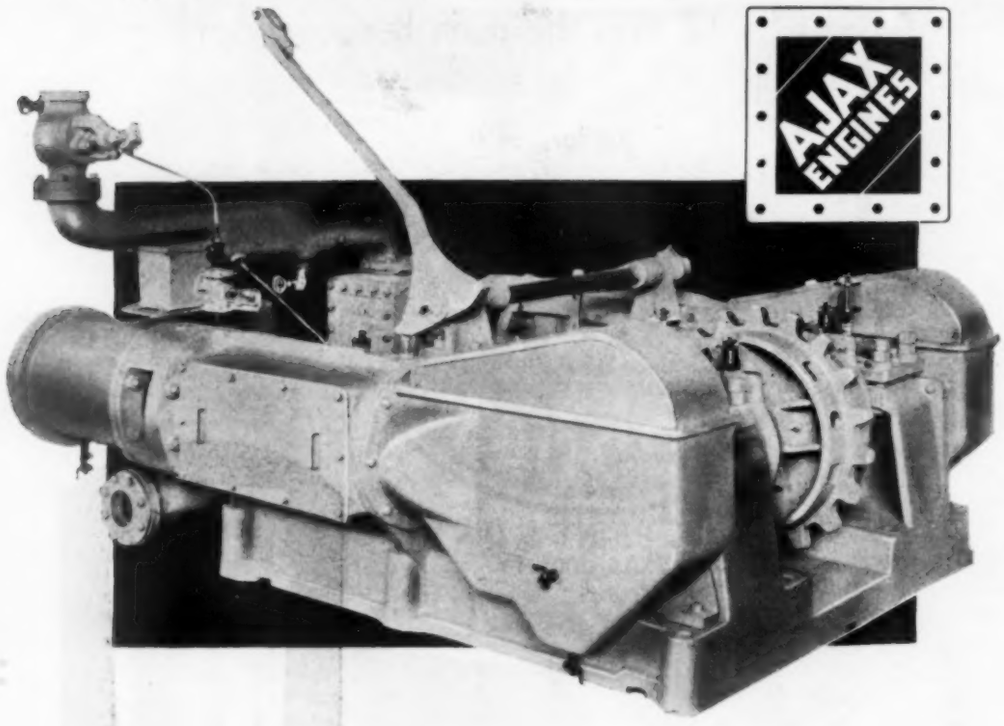

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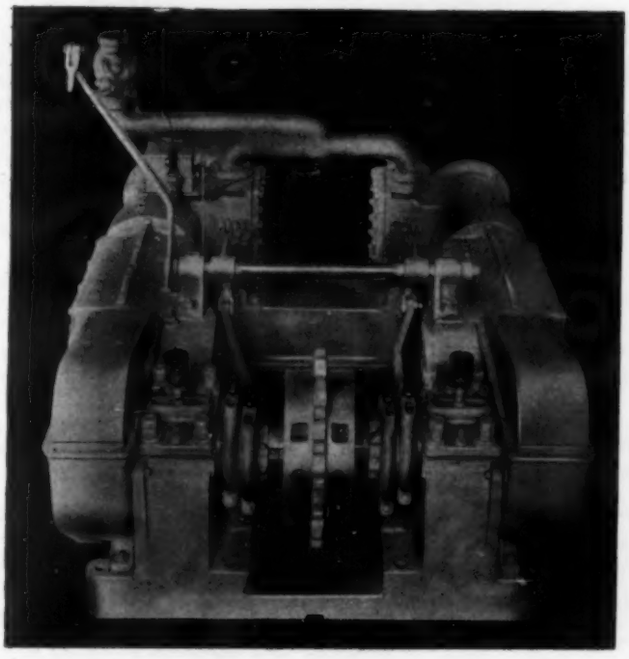

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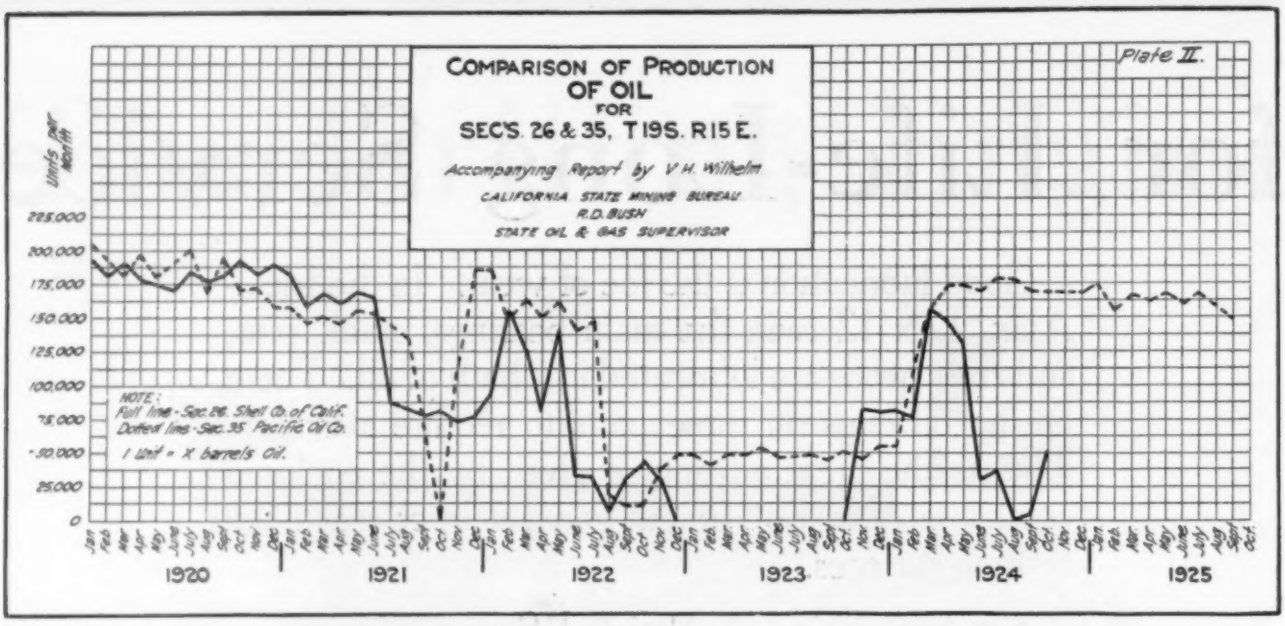
DRILLING ENGINES



shortage in production. Thus it can be seen that above-ground storage of oil represents both a material and economic loss. Underground storage is the ideal method of storing oil, and should be resorted to when conditions are favorable.

Structure

The Coalinga field is separated into two structures; the eastward dipping monocline of the West Side field, and the gently plunging anticline of the East Side field, the east flank of which extends as a monocline to the north.

Operations

Much of the West Side field is divided into small properties, while the East Side field is held almost entirely in large tracts. The small properties of the West Side have generally continued to operate under all adverse conditions, while the large companies during periods of overproduction have resorted to shutting down their producing wells and storing the oil in its natural reservoir, awaiting more favorable conditions before producing. During the periods of depression some areas were operated while contiguous areas of competing companies were shut down, and the question of loss by drainage, from the inactive area to the active area, was immediately brought forward for solution.

The question then which demands a reasonable answer is whether an operator may safely shut down his property with a fair chance of ultimately recovering the same, or nearly the same, amount of production as would have been recovered by continuous operation, and if the loss in production, if any, will be of enough consequence to warrant the construction of storage facilities for it during periods of an unreceptive market.

Theory of Migration

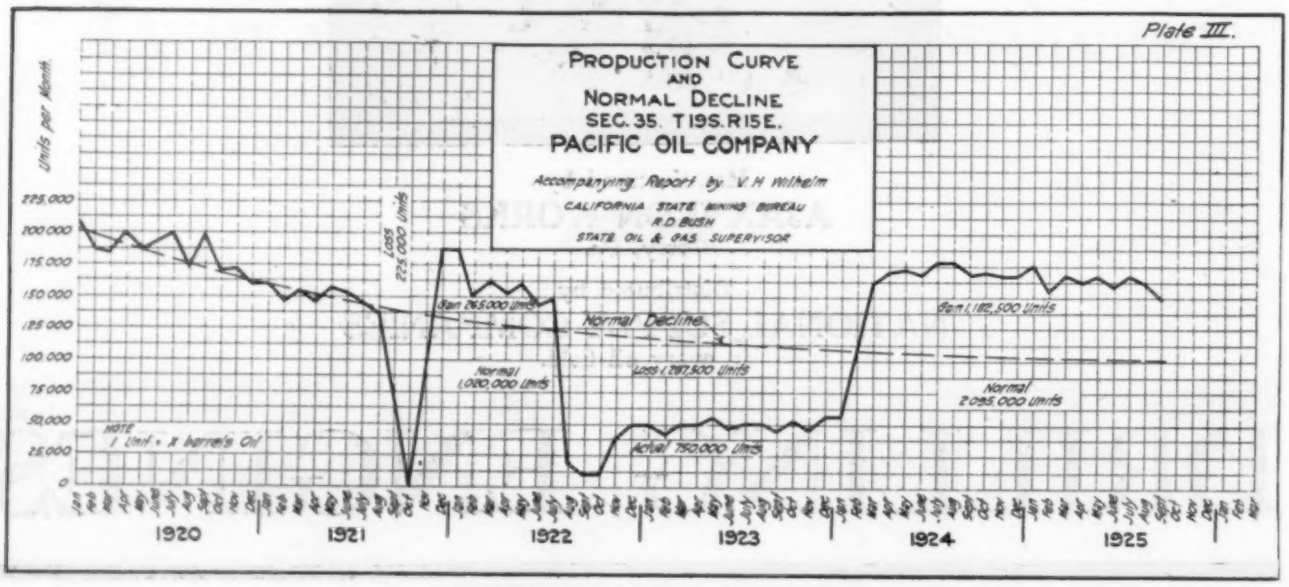
The relative importance of the several factors governing the migration of underground oil are not well known in fields of low gas pressure such as Coalinga.

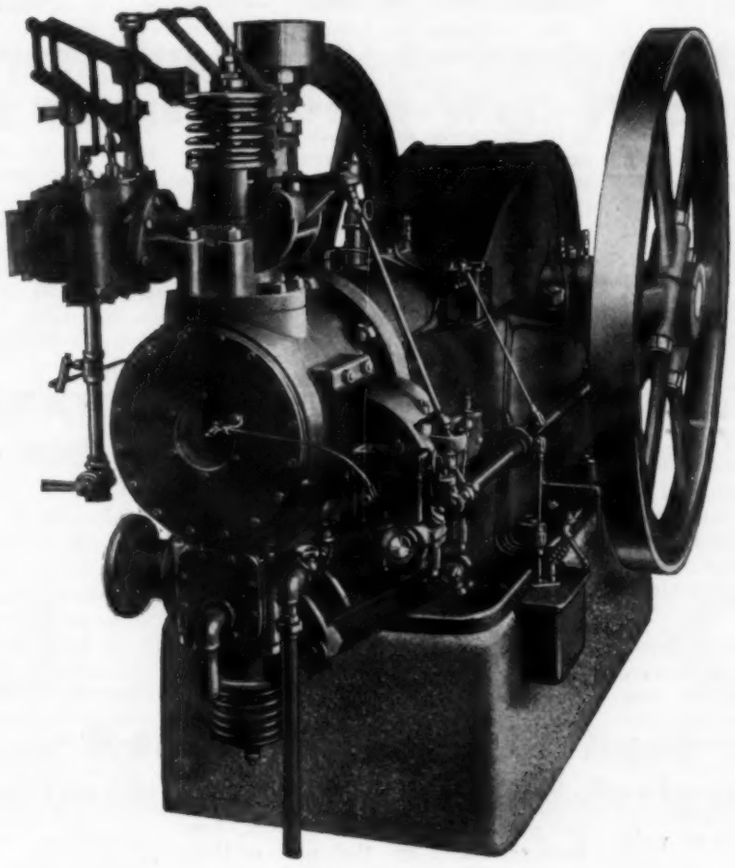
Among these factors are force of gravity, viscosity, and hydrostatic pressure of edgewater. The texture of porosity of reservoir sands, and gas pressure to a slight extent, also have an important bearing on the question.

Gas

In the Coalinga field, where casing-head pressure seldom reaches two pounds, the influence of gas pressure is considered negligible. The casing-head pressure should be a direct index of the action of gas as an expulsive agent. Many wells in the East side field register no pressure at the casing-head, even after being closed in.

Although in the early stage of development of the Coalinga field a very high gas pressure existed, it has long since been depleted. Therefore, ac-





The Valve Mechanism....

another feature of the Reid 65 HP Four Cycle Gas Engine

One of the most notable features contributing to the operating efficiency of the Reid 65 HP Four Cycle Gas Engine is the valve mechanism.

Gas and air are supplied to the engine in correct proportional quantities throughout the entire load range, and, in addition, through the design of the inlet valve case, a uniform mixture is secured. Close speed regulation is maintained by a Massey Governor. There are few adjustments and these can be easily made.

Both inlet and exhaust valves are made of special castings with steel stems and are operated by one cam, so formed that the valves seat without shock, a feature resulting in silence of operation and longer life for the parts. Valve springs are of large diameter and low stress.

The exhaust valve case is waterjacketed and has a protecting apron which prevents hot gases from coming in contact with the exhaust valve stem.

Bulletin No 31 describing this engine will be sent on request

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cumulation of heads of high gas pressure in oil-bearing strata underlying nonproducing areas could not occur, and likewise migration of oil, with gas seeking a vent, would not take place.

Gravity

If it is assumed that the oil lands are of uniform texture and porosity, and at the same time continuous over large areas, oil would be expected to migrate under the force of gravity, to the deeper seated reservoirs. That is to say, the oil would tend to seek a uniform level over the entire structure within which it was confined. This action would certainly cause the flow of oil from nonproducing areas toward producing areas, or even other nonproducing areas lower down on the structure. The tendency would be to resaturate deep territory at the expense of the shallower territory.

However, the oil-bearing sands of the Coalinga field are neither uniform in character nor continuous over large areas. Correlation of well logs and the character of the surface formations give ample proof of this.

Gravity should readjust fluid levels within areas of the same sand texture and in which the same beds are continuous. The migration of oil by gravity is necessarily slow, and depends to a considerable extent on the viscosity and A. P. I. gravity of the oil and the porosity of the sands. During periods of production the fluid levels of wells are naturally lowered. After the wells have been shut in for some time the fluid levels tend to become higher, and approach in some instances the fluid levels of the wells first placed on production. Observations of fluid levels in sections 26 and 27, T. 19 S., R. 15 E., M. D. B. and M., before and after shut-in periods confirm the above statements. Due to this slow action of gravity, each individual well drains but a comparatively small area in close proximity to the hole.

Edgewater

The action of edgewater rising along a line roughly parallel to the strike of the structure, to replace oil as it is removed from its natural reservoir, is one of the forces influencing the drainage of oil from the sands and acts in opposition to the force of gravity.

Under certain conditions the encroachment of edgewater would result in unrecoverable loss of production following a shut-down. If, for example, the deeper of two properties, one above the other on the structure, the deeper being edge territory, were shut down for a long period, while the shallower were continuously operated, the gradual depletion of oil sands common to both properties would result in the encroachment of water in the sands of the deeper property and a migration of oil to the sands of the shallower property.

Future Production—Decline Curves

The estimates of future production and the production figures representing normal production have been based upon family curves prepared particularly for the areas dealt with in this paper. These curves have been constructed by detailed study of the decline of many representative wells of each area where the accumulation of oil is supposed to have taken place under similar conditions, and where the physical character, producing horizon, and water conditions are similar.

The principle involved is that of the "law of equal expectations," which may be stated as follows:

"If two wells under similar conditions produce equal amounts during any given year, the amounts they will produce thereafter, on the average, will be approximately equal, regardless of their relative ages."

According to this law the production of any well of a group having similar producing conditions will decline at a rate applicable to all members of the group. The curve representing the rate of decline of any member of the group will have the same form as the curve for any other member.

In this paper the figures for production during shut-down periods, and also for post shut-down production, have been estimated by the use of these curves. These estimates should represent as close an approximation as is possible for such an investigation.

The first opportunity for observing the effect of closing in production in the East Side Coalinga field was presented during the labor strike of 1921.

The producing properties of Standard Oil Company and Shell Company of California were not affected by the strike, while all the wells of Pacific Oil Company were shut down for a period of about eight weeks. (See Plate I.)

A close study of the production records of these properties fails to disclose any gain in favor of either Standard Oil Company or Shell Company of California line wells, and, moreover, indicates that a large proportion of the production lost by Pacific Oil Company during the strike was recovered within a relatively short time after operations were resumed. An exception to this rule was noted in the wells along the line between sections 11 and 14, where a slight gain is shown in the wells of Shell Company of California during the strike and a slight decline in wells of Pacific Oil Company after the strike.

The comparative figures are given in the table below:

Production Curves

Plate II represents a comparison of production of sections 26 and 35, T. 19 S., R. 15 E., M. D. B. and M., Coalinga field, and is based on monthly reports to the Department of Petroleum and Gas. Minor interruptions have been intentionally omitted, since the purpose of the curve is to learn if interruptions to production of one section are reflected in the production of the other.

The period investigated commences January, 1920, and extends to October, 1925, and includes a period of eighteen months of maximum production for both sections, from January, 1920, to and including June, 1921.

Section 35 was not subjected to periods of shut-down followed by short periods of maximum production as was section 26, except that during part of September, all of October, and part of November, 1921, it was entirely shut down during the labor strike.[1]

The same wells on both sections

(Continued on page 84.)

Location	Company	Number of wells	Total average units of oil per day (1 unit equals X barrels of oil)		
			Before strike (3 months)	During strike (2 months)	After strike (3 months)
Section 10	Shell Company	7	592	565	547
Section 11	Pacific Oil Company	9	520	0	590
Section 14	Shell Company	3	155	192	160
Section 11	Pacific Oil Company	6	707	0	620
Section 26	Shell Company	5	1,315	1,227	1,275
Section 35	Pacific Oil Company	3	392	0	485
Section 34	Shell Company	8	855	815	802
Section 35	Pacific Oil Company	7	957	0	1,070
Section 36	Shell Company	2	245	247	247
Section 35	Pacific Oil Company	1	97	0	125
Section 2	Shell Company	4	217	185	185
Section 3	Pacific Oil Company	5	757	0	950
Section 2	Shell Company	2	380	390	420
Section 11	Pacific Oil Company	1	75	0	105

[1]Summary of Operations California Oil Fields, Vol. 7, No. 8.

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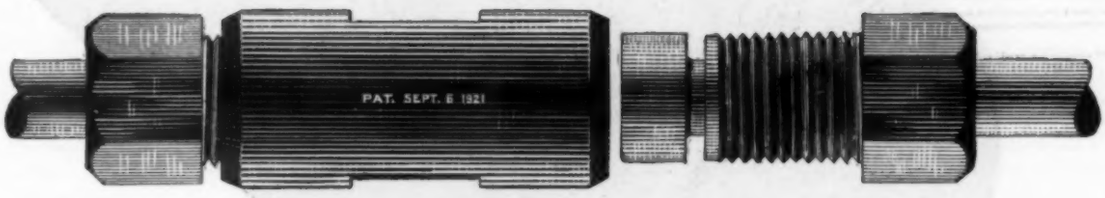

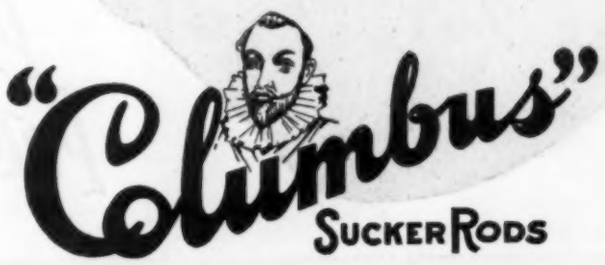

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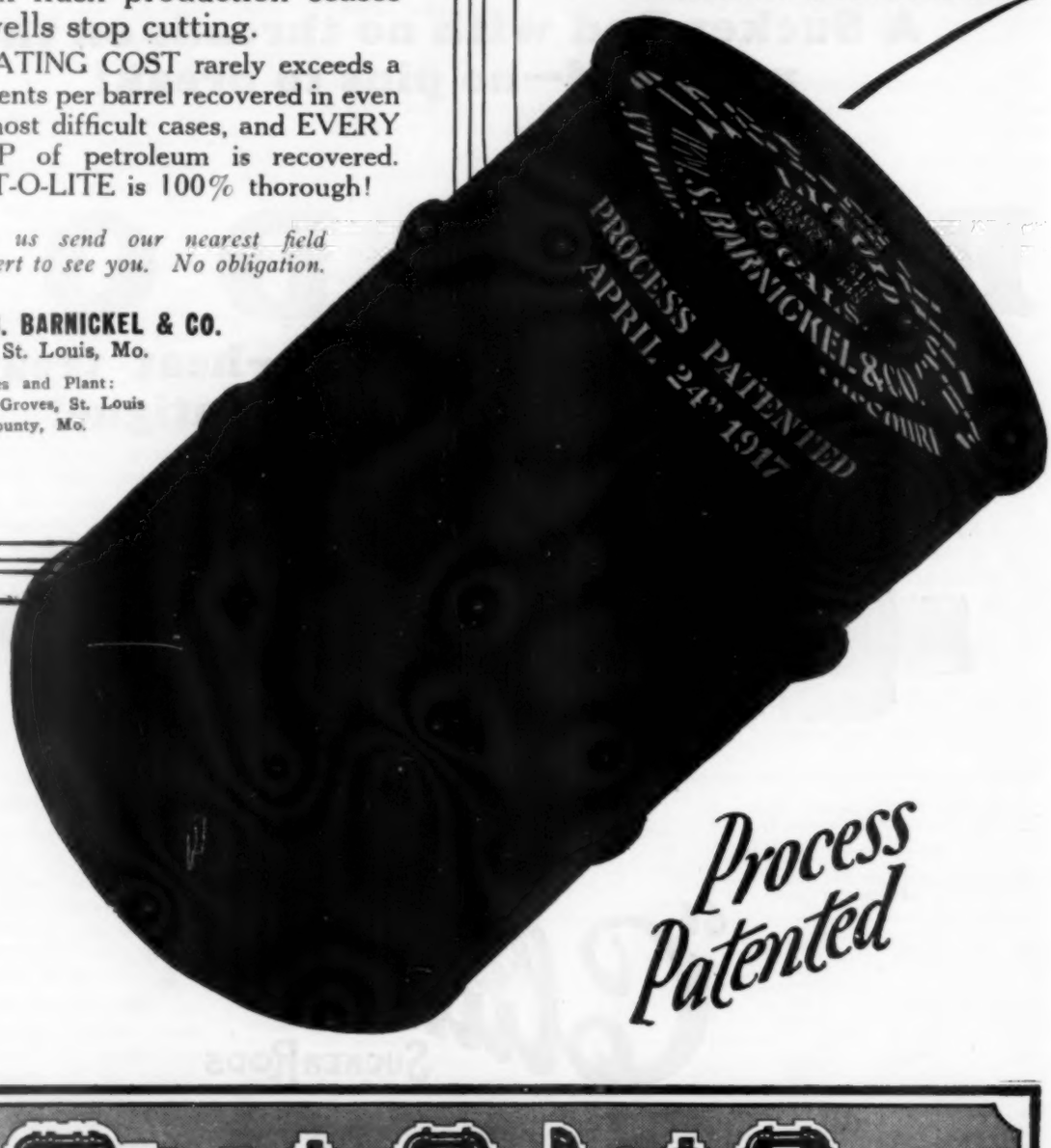

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Magnolia Ready to Move Oil in Beaumont Line

Shreveport, La.—The Magnolia Pipe Line Company has completed the Arkansas-Louisiana units of its eight-inch welded crude carrier being constructed from the Smackover field to Beaumont, and will start next week on transporting Arkansas crude south to the tank farm and pump station at Latex, located on the Texas-Louisiana line. The entire pipe line project involves the construction of 270 miles of eight-inch line; 45 miles of four-inch line from Latex station to Bull Bayou field, Louisiana, and miscellaneous lines to tie into Cotton Valley and other nearby fields in North Louisiana; and the Waskom field in East Texas. The project will cost approximately $3,000,000, and is scheduled for completion by July 1, 1926.

Fast time has been made by the construction crews working on this long welded line, as the work was not started until the early part of February. The route of the line crosses numerous swamp lands and streams, and the worst sections of the route were given first attention in order to get the line welded and buried before the usual heavy spring rains occurred.

A tank farm consisting of eight 55,000-barrel steel tanks has been erected near the Latex pump station, and Arkansas-Louisiana crude will be pumped to this point to afford storage relief in the fields until the pipe line unit between Latex and Beaumont can be completed. The line just completed from Smackover to Latex is 110 miles in length.

Magnolia plans to move crude south through its line as the construction work is completed, making use of 55,000 barrel storage tanks spotted at each pump station along the route, and will deliver crude into Beaumont on the same day that the final unit of the tank line is completed and tested. C. R. Swank is the pipe line superintendent for Magnolia in the Louisiana-Arkansas district with headquarters at Shreveport.

Gathering Line Starts Moving Gary County Oil

Amarillo, Texas.—Sinclair Crude Oil Purchasing Company's crude gathering system extending from the Wilcox field, Gray County, to the town of Pampa, which is the nearest point on the Panhandle & Santa Fe Railroad, began running oil April 22. This line is about six miles in length, and was built to serve the Wilcox Oil and Gas Company's producing leases in the Wilcox field, which is doing about 500 barrels of high gravity crude daily.

Sinclair loads the crude in tank cars at Pampa, and ships same to the Sinclair water terminals at Sinco, near Houston, at 20½ cents per hundred pounds freight rate. The crude oil will be accumulated in tanker quantities, and later moved to Sinclair's refinery at Marcus Hook, Pa. Sinclair is to pay the same price for the Gray County crude as being offered by other major buyers in the Texas Panhandle.

The Gray County crude has a medium viscosity, and is not difficult to handle in cold weather as is the case in Carson and Hutchinson counties. Harry Pohl is in charge of Sinclair's Wilcox field gathering system.

Laying of 12-inch 70-Mile Line Will Be Started Soon

Houston, Texas.—Contract has been let by the Houston Pipe Line Company to MacPherson & Mitchell for the laying of the 70-mile 12-inch gas pipe line from the Cole and Carolina-Texas gas fields of Webb and Duval Counties to Lucas in Live Oak County, and work is expected to begin on the line on the arrival of pipe at Lucas and Bruni.

The new line will be used in supplying an added amount of natural gas for the 18-inch 206-mile main line from Lucas to the Houston ship channel. The survey of the right-of-way for the line has been practically completed.

The six-inch oil line of the Houston Pipe Line Company from the Cole field to the Houston Oil Company tank farm near Bruni has been completed, and the first production turned in the line Wednesday of last week. One 55,000-barrel tank has been completed at the tank farm and a second of the same capacity is now under construction, which will take care of the company's production from leases in the new discovery section just out of the Cole gas field.

Prairie Turns Lines Over To New Company

Mexia, Texas.—The Prairie Pipe Line Company discontinued its crude gathering activities in the Mexia-Corsicana district effective 7 a. m. April 21, and turned all connections and gathering lines over to the Pure Oil Pipe Line Company of Texas, which is controlled by Prairie with a minority of the stock held by Pure Oil Company.

Prairie was handling about 6500 barrels of crude daily in the district, and the greater portion of which was being taken on old contracts. Since Pure Oil Pipe Line Company was also making crude runs from most of the leases connected by Prairie, and making deliveries via eight-inch line to the Gulf Coast, the shift was made without requiring the construction of additional lines.

The withdrawal of Prairie from the district was an economical move, as Pure has ample line capacity to take on the

Tieing in a section of welded eight-inch line on Magnolia's Beaumont-Smackover crude carrier

connections formerly served by Prairie. Prairie is arranging to take care of its employees in the Mexia-Corsicana district at other points in the Mid-Continent. Chas. Fitzgerald is in charge of the operations of the Pure Oil Pipe Line Company of Texas with headquarters at Dallas, and J. H. Bingham is the district superintendent.

Marland Oil Report For First Quarter

Ponca City, Okla.—Earnings of Marland Oil Company and its subsidiaries for the first quarter of 1926, show net income of $3,630,066, after interest, depreciation, depletion and allowing for abandoned leases. Federal taxes, estimated at $235,000 for the quarter, are not included.

Condensed, consolidated balance follows:

LIABILITIES

	December 31, 1925	March 31, 1926
Capital and Surplus Equity		
Shares of Capital Stock Authorized	2,000,000	2,000,000
Net Equity—Represented by 1,895,103 10/20 shares December 31, 1925; 1,896,245 4/20 shares March 31, 1926	$88,897,186	$90,601,483
Minority Interests	120,306	26,951
Reserve for Federal Taxes	875,000	875,000
Current Liabilities		
Accounts Payable	2,634,886	3,214,677
Miscellaneous Accrued Items	275,051	350,294
Total Current Liabilities	$2,909,937	$3,564,971
	$92,802,429	$95,068,405

ASSETS

	December 31, 1925	March 31, 1926
Fixed Assets	$78,267,821	$82,912,272
Less Depreciation and depletion	20,449,226	21,840,990
	$57,818,595	$61,071,282
Investments and advances	12,439,619	12,559,589
Deferred Charges	1,432,958	1,386,099
Current Assets		
Cash	3,999,108	3,021,389
U. S. Treasury Certificates	1,000,000	
Bills and Accounts Receivable	5,588,623	5,900,237
Inventories at lower of Cost or Market:		
Crude Oil	4,573,818	3,917,887
Refined Products	3,970,655	4,920,245
Inventory of Materials and Supplies	1,764,672	2,238,738
Miscellaneous Accrued Items	214,381	52,939
Total Current Assets	$21,111,257	$20,051,435
	$92,802,429	$95,068,405

Second Trial Being Made To Open New Fault Area

Mexia, Texas.—Undaunted by the showing of salt water with no oil in evidence when bailed early Friday morning, the drilling crew on the Transcontinental Oil Company's J. D. Ross wildcat test, which is testing the Woodbine sand in a zone of faulting lying west of the Mexia field, took another core early this week at 2897 feet and found sufficient evidence of oil to justify further testing.

This test was widely heralded as having the earmarks of a new fault field discovery and was given the serious attention of Mid-Continent and usual fault line field operators after having taken an oil saturated core April 10 in Woodbine sand at 2890-91 feet, and a second core showing some oil in evidence at 2895 feet. Secretative methods employed by the owners regarding the depth and nature of formations drilled contributed to the interest in the outcome of the test, and several hundred oil men and residents of Mexia were on hand to watch the bailing of the test at 3 o'clock in the morning.

Casing used in the Transcontinental Oil Company's wildcat was badly worn when placed in the hole, and is believed to be partially responsible for the presence of some of the salt water bailed from the well, as the temperature of the water ranged from 80 to 90 degrees, while the normal temperature of salt water coming direct from the woodbine sand horizon in the East Central Texas fault region is from 110 to 120 degrees. A new string of National pipe was purchased early this week, and was to be run to the top of the Woodbine horizon as a final effort to open a new field in the fault region.

Regardless of the outcome of the wildcat test now being drilled by Transcontinental on the J. D. Ross 24-acre tract, located on the west bank of Nigger Creek and about three miles west of the lower end of the Mexia field, another try for production on the structure will be made by the company. Transcontinental has about 1500 acres blocked almost solid around this test, while Pure Oil Company and the Reiter-Foster Oil Corporation control the greater portion of the remaining close-in acreage.

Barnsdall Has Deep Well at Rosecrans

Los Angeles, Cal.—All the cream of results from deep sand development in Athens-Rosecrans oil field seems to be going to the Barnsdall Oil Company.

As a step in development of the Hoge zone, a new deep horizon, the Barnsdall this week brought in O'Dea No. 4 from 4920 feet for an initial production of 1600 barrels of 39 gravity clean oil. Along with the oil, O'Dea 4 is producing 1,600,000 cubic feet of gas with a high gasoline content.

Other operators in the field have tried for deep sand production, but none have had any luck. The Hoge sand, which lies roughly 400 feet beneath the Maxwell sand on the Barnsdall O'Dea lease, does not seem to underlie properties of the other operators.

However, the old production in Athens-Rosecrans is holding up fairly well and there is some good yield to be gotten from the older and better known zones. Bearing out this statement is the completion this week of the General Petroleum Corporation's W. H. Fisher No. 15, which made 300 barrels of 32 gravity oil from 4700 feet.

Activity Growing Along Texas-Louisiana Border

Houston, Texas.—A probable revival of activity is seen in the old producing section along the Texas-Louisiana border on the shores of Caddo Lake following the completion of three wells by the Gulf Refining Company and the completion of a geological survey made by Leon J. Pepperberg of Dallas, Texas, which reveals the structure and all known producing formations in the Ferry Lake district. The expected play will be to a great measure extended into Harrison and Marion Counties on the Texas side.

Murphey and Sample of El Dorado, Arkansas, have started operations in this section, and are drilling at 1000 feet in a test on the Chew lease at Port Caddo. Formations at this point have been proven higher by Pepperberg's survey and also one made by the U. S. Geological Survey, which also shows the axis of the Caddo Lake anticline to cross southwest into Texas.

Clark and Greer of Shreveport will begin drilling late this week on the L. S. Sluter Survey near Clinton landing and G. W. Brown et al of Dallas have a location made on the H. T. Little Survey on Caddo Lake at the Harrison-Marion County line. Harper & McCann have three rigs running on the Texas side, after having operated for several years across the Louisiana line.

The McKinney Oil Company of Denver spudded a test on the Stephen Peters survey last week near the point where the Crusader Oil Company's Burk No. 1 is pumping 50 barrels, and where the W. D. Chew well near Clinton Landing has been producing a small yield of 43 gravity oil from the chalk rock for some 10 years. Harper and McKenna's Eagle No. 1 on the Sluter Survey is drilling below 600 feet while Harper & Hudson's Taylor No. 1, on the Paine Survey, is around 900 feet. Clark & Melat have a test on the A. P. Hope Survey on Taylor Island down 1007 feet in the Nacatoch sand, which at this point checks 45 feet higher than the old Dallas Club House wells drilled in this vicinity several years ago.

Oil in Paying Quantities

Oil in "paying quantities" means in paying quantities to the lessee, according to a recent decision of the Oklahoma Supreme Court. The Court says in this connection, "If the profit, even small, is over operating expenses, it (the well) produces in paying quantities, although it may never repay the cost of operation, and as a whole it may prove unprofitable."

Oklahoma Wildcat May Prove New Productive Area

Grant county test made producer in what is believed to be the Wilcox

By Roye Munsell
Staff Representative

Tulsa, Okla.—What may prove to be a new oil pool for Oklahoma had its conception during the latter part of the week.

In eastern Grant County, the Marland Oil Company's wildcat well, the Webb No. 1, NW NE 2-27-3w, had a pay at 4342 feet and flowed at the rate of 20 barrels an hour when one foot in the sand. After making a steady flow for more than an hour, the test was shut down until tankage could be provided.

May Be Wilcox

The pay is believed to be the Wilcox sand, but no definite information to that effect has been forthcoming.

At several shallower depths, the Marland test had oil and gas showing, but none developed into worthwhile proportions. A week ago a shale was found at 4292 feet which yielded a small amount of very high gravity oil. At 4025 to 4045 feet 2,000,000 feet of gas was picked up, and from 4050 to 4100 a chat formation yielded 10,000,000 feet of gas.

About three miles southwest of the Marland test is the Deer Creek field, while it is well known for its good gas wells, very little actual oil has been produced from it.

The Marland company has about 4000 acres of leases in the neighborhood of the new discovery. A take-off shows:

In 1-27-3w: Marland Oil Co., NW and W½ NE; T. B. Slick, E½ NE; Atlantic Oil Prod. Co., W½ SW; Prairie O. & G. Co., E½ SW; Blackwell O. & G. Co., W½ SE.

In 2-27-3w: Marland, NE, SE, NW and E½ SW.

In 11-27-3w: Marland E½ NE; Joe Lathrop, W½ NE; J. E. Curran, N½ NW and SW NW; Quadrangle Pet. Co., SE NW.

In 12-27-3w: Pure Oil Co., NE; Gypsy, NW and N½ SW; Prairie, S½ SW; Mid-Kansas O. & G. Co., W½ SE; Texas Company, E½ SE.

In 34-28-3w: All to Marland Oil Co.

In 35-28-3w: Marland SE and NW; Gypsy NE; Tidal SW.

In 36-28-3w: Marland Mid-Continent, SE and NW; Roxana Pet. Corp., SW; Sinclair, NE¼, except SW NE which is held by Gypsy Oil Co.

Important Wildcat

Another important wildcat find is the E. J. Searight et al, Davis 1, SEc NE SE 33-10-6, Seminole County. For some time it had been showing for a producer. At 4109 feet it made from three to four million feet of gas, and at 4112 to 4114 feet it found the Hunton lime. When drilled to the further depth of 4115 feet, the test began spraying oil. At the total depth of 4117 feet a flow amounting to around 18 barrels an hour came. It will be slowly deepened.

Nearest production is the Earlsboro pool along the Pottawatomie-Seminole county line in 9-5 and the Indian Territory Illuminating Oil and Foster Petroleum producer in 24-9-6.

The Indian Territory-Foster, Dyer 1, NWc SE 24-9-6, is producing some 1000 barrels daily from the Hunton lime.

These two Hunton lime producers, one in 9-6 and the other in 10-6, may mean a Hunton lime pool of some size in what is commonly called the "south end" district of Oklahoma.

That formation is tricky, however, and only a lot of drilling can prove much one way or the other. To date no large Hunton lime pool has been found. Nevertheless, with the Shelly Ford well in 7-15-16, Lincoln County, which came in for 1751 barrels initial from the Hunton lime, that formation has become of not a little practical concern to operators.

Wewoka Is Major

The Wewoka field moved into the class of the major oil fields of the Mid-Continent during the past week when Wilcox sand production passed the 30,000-barrel-a-day mark.

The tenth deep sand producer, the Dixie Oil Company, Garner 1, NEc 5-7-8, accounted for much of the increase when it came in for an initial flow of 91 barrels an hour from sand topped at 4157 feet and drilled to 4171 feet.

The prospective eleventh producer is the Prairie O. & G. Co., Walker 1, SWc SE 32-8-8. A total of seven wells are drilling in the field.

The first nine deep sand wells produced, according to the latest available gauge, as follows:

Amerada Petroleum Corporation, Fredricks 1, 4122; Fredricks 3, 3776.

Magnolia Petroleum Company, Skinner-Harjo 1 (discovery well), 21; Skinner-Harjo 2, 5244; Skinner-Harjo 3, 3808; Franz 3, 3207.

Homaokla 3,333; Independent-Atlantic, 1590; Ramsey, Amos 4, 2838.

The Magnolia Petroleum Company's discovery well, the Skinner-Harjo 1, NW 5-7-8, which recently quit flowing is now producing by swabbing. The hole has been plugged back a few feet with lead wool in an attempt to shut off the water.

The deep sand gusher area of the old Wewoka field is not expected to be very large. Indications are, however, that it will produce much oil.

The Fairfax pool of Osage County, which was opened up in January this year when the Prairie Oil and Gas Company brought in its No. 1 well in the SW SE 21-25-6e for 650 barrels initial, is proving to be somewhat of a Jonah.

Five Good Wells

While all of the five wells drilled by the Prairie turned out uniformly good, the five offsets by Sinclair, Phillips and the Indian Territory Illuminating Oil Company turned out uniformly bad. Of the two tests drilled by Sinclair, two by Phillips and one by the Indian Territory I. O. Co., not one produced sufficient oil to warrant operation. Two immediately started filling up with salt water when the sand was struck.

The Indian Territory well which had a showing of oil in the Burgess sand will be made a Wilcox sand test.

The Gypsy Oil Company, as a result of the purchase of a block of leases in 32-25-6 at the March Osage sale, will make a test in that part of the Fairfax territory as soon as some difficulties can be straightened out.

Surface rights of a portion of the Gypsy lease are owned by one Jack Uts. Jack refuses company representatives the right to enter his properties, the contention being that drilling would damage said property. Of course, all would be well if damages were paid for in advance.

The matter, apparently, must be settled by a court decision. The outcome will be of much interest to Osage county operators, of course.

The New Yale pool of Payne County, Oklahoma, apparently has been defined both to the north and the south by recent wells completed there.

To the south, the Magnolia Petroleum Company, Pleasant 2, NWc SW NW 24-19-4, found a hole full of water. The lime was topped at 3652 feet and the drill went into black shale at 3745 feet. The sand was picked up at 3768 feet.

CRUDE OIL PRICE QUOTATIONS

Crude Price Changes

April 27.—Effective at the opening of the market today the Joseph Seep Purchasing Agency announced a 15 cent increase on the price of Gaines crude, bringing the present posting to $3.10.

April 27.—Effective at the opening of the market today, the Humble Oil & Refining Company posted a 15-cent increase on grade "B" coastal crude, and added five gravity listings beginning with 31 to 31.9, making the present schedule include oil from 25 to 35 and above. Boling was also added to the list of fields covered by this posting making the list read as follows: Goose Creek, Hull, Liberty, West Columbia, Orange, Pierce Junction and Boling.

No other company had met the Humble's posting at the time this went to press.

Current Postings

EASTERN STATES

	April 28 1926
New York Transit	3.65
Bradford District	3.65
National Transit	3.55
Southwest	3.55
Eureka	3.50
Macksburg	3.30
Gaines	3.10
Somerset medium	2.55
Somerset light	2.70
Cabell	2.50
Ragland	1.40
Corning	2.35

CENTRAL STATES

Illinois	2.12
Indiana	2.00
Lima	2.23
Plymouth	1.65
Princeton	2.12
Waterloo	1.10
Wooster	2.35

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

36 and above	2.05
33 to 35.9	1.95
32.9 and below	1.85

MID-CONTINENT

	Prairie Sinclair* Texas Gulf	Magnolia
Below 28		1.20
28 to 28.9 gravity	1.40	1.40
29 to 29.9 gravity	1.48	1.48
30 to 30.9 gravity	1.56	1.56
31 to 31.9 gravity	1.64	1.64
32 to 32.9 gravity	1.72	1.72
33 to 33.9 gravity	1.80	1.80
34 to 34.9 gravity	1.88	1.88
35 to 35.9 gravity	1.96	1.96
36 to 36.9 gravity	2.04	2.04
37 to 37.9 gravity	2.12	2.12
38 to 38.9 gravity	2.20	2.20
39 to 39.9 gravity	2.28	2.28
40 to 40.9 gravity	2.36	2.36
41 to 41.9 gravity	2.44	2.44
42 to 42.9 gravity	2.52	2.52
43 to 43.9 gravity	2.60	2.60
44 to 44.9 gravity	2.68	2.68
45 to 45.9 gravity	2.76	2.76
46 to 46.9 gravity	2.84	2.84
47 to 47.9 gravity	2.92	2.92
48 to 48.9 gravity	3.00	3.00
49 to 49.9 gravity	3.08	3.08
50 to 50.9 gravity	3.16	3.16
51 to 51.9 gravity	3.24	3.24
52 and above	3.32	3.32

*Sinclair's postings include no oil above 44 gravity.

TEXAS PANHANDLE

Posted by Magnolia, Kay County Gas Company and the Plains Pipe Line Company, April 14.

Below 31 gravity	1.20
31 to 33.9	1.35
34 to 36.9	1.55
37 to 39.9	1.70
40 and above	1.75

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran, Somerset and Big Lake crude

	Somerset (Grayburg)	Humble O. & R. Co. Texas Co.*
28 to 28.9 gravity	1.15	1.40
29 to 29.9 gravity	1.25	1.48
30 to 30.9 gravity	1.31	1.56
31 to 31.9 gravity	1.39	1.64
32 to 32.9 gravity	1.47	1.72
33 to 33.9 gravity	1.55	1.80
34 to 34.9 gravity	1.63	1.88
35 to 35.9 gravity	1.71	1.96
36 to 36.9 gravity	1.79	2.04
37 to 37.9 gravity	1.87	2.12
38 to 38.9 gravity	1.95	2.20
39 to 39.9 gravity	2.01	2.28
40 to 40.9 gravity	2.07	2.36
41 to 41.9 gravity	2.13	2.44
42 to 42.9 gravity	2.19	2.52
43 to 43.9 gravity	2.25	2.60
44 to 44.9 gravity	2.31	2.68
45 to 45.9 gravity	2.31	2.76
46 to 46.9 gravity	2.31	2.84
47 to 47.9 gravity	2.31	2.92
48 to 48.9 gravity	2.31	3.00
49 to 49.9 gravity	2.31	3.08
50 to 50.9 gravity	2.31	3.16
51 to 51.9 gravity	2.31	3.24
52 and above	2.31	3.32

Corsicana Heavy $1.15 per barrel, posted by Magnolia.

*Gulf Coast light oil is included in this schedule, posted by The Texas Company.

SOUTH TEXAS

Mirando (Texpata)	1.15
Mirando (Magnolia)	1.15

GULF COAST

Grade "A" all companies	1.50
Grade "B" (The Texas Company) below 28 gravity	1.25

Above 28 gravity The Texas Company's posting is the same as that for North and Central Texas posting.

Humble Oil & Refining Company:

Below 25	1.40

(Continued on page 56.)

California Crude Oil Prices at the Well

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity (degrees)	Signal Hill	Huntington Beach	Inglewood	Olinda-Brea Canon	Rosecrans Dominguez	Torrance	Richfield	Whittier	La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall	Midway-Sunset Elk Hills	McKittrick	Lost Hills	Coalinga	Kern River	Wheeler Ridge
14-14.9	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15.9	.87	.87	.87	.87	..	.87	.87	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
16-16.9	.90	.90	.90	.90	..	.90	.90	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
17-17.9	.94	.94	.94	.94	..	.94	.94	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
18-18.9	.98	.98	.98	.98	..	.98	.98	.86	.86	.86	.86	..	.75	.75	.75	.75	.75	.75	.75
19-19.9	1.04	1.04	1.04	1.04	..	1.04	1.04	.87	.87	.87	.87	..	.75	.75	.75	.75	.75	.75	.75
20-20.9	1.10	1.10	1.10	1.10	..	1.10	1.10	.89	.89	.89	.90	..	..	.82	..	.82	.79	..	.78
21-21.9	1.16	1.16	1.16	1.16	..	1.16	1.16	.91	.91	.91	.98	..	..	.90	..	.90	.86	..	.81
22-22.9	1.22	1.22	1.22	1.22	..	1.22	1.22	.94	.94	.94	1.06	..	..	1.00	..	1.00	.93	..	.85
23-23.9	1.28	1.28	1.28	1.28	..	1.28	1.28	..	..	.97	1.14	..	..	1.11	..	1.11	1.00	..	.89
24-24.9	1.34	1.34	1.34	1.34	1.34	1.34	1.34	..	..	1.01	1.22	1.02	..	1.22	..	1.22	1.07	..	.93
25-25.9	1.40	1.40	1.40	1.40	1.40	1.40	1.40	..	..	1.05	1.30	1.08	..	1.33	..	1.33	1.14	..	.97
26-26.9	1.46	1.46	1.46	1.46	1.46	1.46	1.46	..	..	1.09	1.38	1.16	..	1.44	..	1.44	1.21	..	1.01
27-27.9	1.52	1.52	1.52	1.52	1.52	1.52	1.52	..	..	1.13	1.46	1.24	..	1.55	..	1.55	1.28	..	1.05
28-28.9	1.58	1.58	1.58	1.58	1.58	1.58	1.58	..	..	1.17	1.54	1.32	..	1.66	..	1.66	1.35	..	..
29-29.9	1.64	1.64	..	1.64	1.64	..	1.64	..	..	1.21	1.62	1.40	..	1.77	..	1.77	1.42	..	..
30-30.9	1.70	1.70	..	1.70	1.70	..	1.70	..	..	1.25	1.70	1.48	..	1.88	..	1.88	1.49	..	..
31-31.9	1.76	1.76	..	..	1.76	..	..	..	..	..	..	1.60	..	1.99	..	1.99	1.56	..	..
32-32.9	1.84	1.84	..	..	1.84	..	..	..	..	..	..	1.72	..	2.10	..	2.10	1.63	..	..
33-33.9	..	..	..	..	1.92	..	..	..	..	..	..	1.84	..	2.21	..	2.21	1.70	..	..
34-34.9	..	..	..	..	2.00	..	..	..	..	..	..	1.96	..	..	..	2.32	1.77	..	..
35-35.9	..	..	..	..	2.08	..	..	..	..	..	..	2.08	..	..	..	..	1.84	..	..
36-36.9	..	..	..	..	2.16	..	..	..	..	..	..	2.16	..	..	..	..	..	..	..
37-37.9	..	..	..	..	2.24	..	..	..	..	..	..	2.24	..	..	..	..	..	..	..
38-38.9	..	..	..	..	2.34	..	..	..	..	..	..	2.31	..	..	..	..	..	..	..
39-39.9	..	..	..	..	2.44	..	..	..	..	..	..	2.44	..	..	..	..	..	..	..
40-40.9	..	..	..	..	2.54	..	..	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	2.64	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	2.74	..	..	..	..	..	..	..	..	..	..	..	..	..	..

1916
1926

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	April 28 1926
25 to 25.9	1.45
26 to 26.9	1.50
27 to 27.9	1.55
28 to 28.9	1.60
29 to 29.9	1.65
30 to 30.9	1.70
31 to 31.9	1.75
32 to 32.9	1.80
33 to 33.9	1.85
34 to 34.9	1.90
35 and above	1.95
Gulf Production Company:	
Below 25	1.25
25 to 25.9	1.30
26 to 26.9	1.35
27 to 27.9	1.40
28 to 28.9	1.45
29 to 29.9	1.50
30 and above	1.55

LULING

Based on Contract	1.20

WYOMING-MONTANA

Wyoming

Byron	2.25
Ferris	1.53
Elk Basin	2.15
Grass Creek	2.15
Rock Creek	2.00
Lost Soldier	1.10
Lance Creek	2.15
Mule Creek	1.50
Notches	.65
Big Muddy	2.00
Osage	2.15
Hamilton Dome	1.80
Pilot Butte	1.75
Torchlight-Greybull	2.15
Lander	1.10

Salt Creek (Midwest Refining Company)

29 to 29.9 gravity	1.48
30 to 30.9 gravity	1.56
31 to 31.9 gravity	1.64
32 to 32.9 gravity	1.72
33 to 33.9 gravity	1.80
34 to 34.9 gravity	1.88
35 to 35.9 gravity	1.96
36 to 36.9 gravity	2.04
37 to 37.9 gravity	2.12

Montana

Sunburst	1.15
Cat Creek	2.15

NEW MEXICO

Artesia	1.70
Hogback	1.95

CANADIAN CRUDE

Oil Springs	2.70
Petrolia	2.63

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS

Caddo

38 gravity and above	2.20
35 to 37.9 gravity	2.10
32 to 34.9 gravity	2.00
Below 32 gravity	1.85

Homer

35 gravity and above	1.95
33 to 34.9 gravity	1.85
31 to 32.9 gravity	1.75
Below 31 gravity	1.60

Cotton Valley

All grades	1.10

Haynesville

33 gravity and above	1.85
Below 33 gravity	1.75

Bull Bayou

38 gravity and above	2.00
35 to 37.9 gravity	1.85
32 to 34.9 gravity	1.70
De Soto crude	2.05
Crichton	1.85
Bellevue	1.50
Jennings	1.50
Vinton	1.50

Urania Well Increases Flow From 100 to 1000 Barrels

Shreveport, La.—O. W. Clark's Tullos No. 1, located in section 23-10n-1e of the Urania Field, which was completed more than three months ago as a 100-barrel well, has increased its flow to around 1000 barrels of oil per day. The production from this well, combined with around 1200 barrels of new production from recent completions, has served to increase the field's daily total to around 11,000 barrels, which establishes a new high record. The Natural Gas and Fuel Corporation, of El Dorado, got a 400-barrel well last week on its Tullos lease, in section 26, while other newly completed wells range from 10 to 200 barrels per day in initial production.

Another flurry of excitement has followed recent tests in the Holmes-McCurry-Paulet Syndicate's Swope wildcat, in section 18-9n-1e, of Grant Parish, which gives promise that the Urania field may be extended in a southwesterly direction to a distance of about six miles. Six-inch casing was set at 1600 feet, and the well was finished at a total depth of 1623 feet. It is now flowing at the rate of about five barrels of oil per day, along with small quantities of gas and salt water. The Gulf Refining Company, and other operating companies, have made extensive purchases in the vicinity since the completion of this test, paying from $25.00 to $50.00 per acre in bonuses.

The Southern Crude Oil Purchasing Company has obtained from the Department of Conservation a permit to drill a well on the Munn-Wadley property, at a point 990 feet south and 320 feet west of the northeast corner of the southeast quarter of the northwest quarter of section 1-22-10, of the Shongaloo district. It is said that this is to be a deep test, to be drilled in an effort to penetrate to the deep sand which is productive at Cotton Valley, nearby. A deep test is also in progress on one of the Gilliland Oil Company's properties at Haynesville.

The Ohio Oil Company is drilling at 4850 feet, after having completed a difficult fishing job, in its Cox well, in section 23-21-10, of the Cotton Valley field. Both the Magnolia and the Humble companies are milling on pieces of drill-bit or other metal in their deep tests in sections 8-20-9 and 22-21-10, respectively.

Aarnes and others are bailing today to test a deep sand logged at 3302 feet in their Brown No. 2, located in section 13-15-20, of the Stephens field, in Columbia County, Arkansas. A showing of oil was reported at this depth before casing was set.

The Buffalo Oil Company's Morgan No. 4, in section 22-15-19, of the Ouachita County side of the Stephens field, was finished in the shallow sand last week as a small gasser. It makes around 2,000,000 cubic feet per day, with occasional heads of oil and salt water.

The Arkansas Fuel Oil Company's Red River Lumber Company No. 3, located in section 7-19-24, of the Bradley district of La Fayette County, was abandoned last week as dry at a total depth of 2831 feet. Its log checks about 20 feet lower, structurally, than that of Red River Lumber Company No. 1, the discovery well of that area.

Grimes & Jones brought in an 8,000,000 cubic foot gas well on their Lovett property, in section 6-18-14, of the El Dorado east field. Six-inch pipe was set at 2169 feet, and the well was completed at a total depth of 2189 feet.

The Gulf Refining Company is preparing to make a very interesting test of a shallow sand, said to have showed oil, at a depth of 968 feet, in its Byrd wildcat, in section 2-19-14, of Caddo Parish, located about four miles southwest from Benton and about five miles southeast from Dixie. The Gulf has resumed drilling in its Lane deep test, in section 13-21-15, of the Pine Island district, now reported to be around 3680 feet in depth. Other deep tests are being drilled in the vicinity by the Arkansas Natural Gas and Fuel Corporation, the Dixie Oil Company, the Ohio Oil Company and the Texas Company.

	April 28 1926
Edgerly crude	1.50
Urania	1.30

Smackover (Standard, Gulf, Louisiana, Shreveport-El Dorado and Atlanta)

27 and above	1.40
26 to 26.9 gravity	1.35
25 to 25.9 gravity	1.30
24 to 24.9 gravity	1.25
Below 24 gravity	1.00

The Texas Company

27 and above	1.40
26 to 26.9 gravity	1.35
25 to 25.9 gravity	1.30
24 to 24.9 gravity	1.25
Below 24 gravity	1.00

El Dorado

33 gravity and above	1.85
Below 33 gravity	1.75
East Field (Calion)	.95

Stephens District

26 gravity and above	1.50
Below 26 gravity	1.30

Roxana Office Moved

Houston, Texas.—The Houston office of Roxana Petroleum Corporation was moved April 24 from the fifth floor of the First National Bank Bldg., to the twentieth floor of the Post-Dispatch Bldg. The growth of the Roxana force in the Gulf Coast territory has necessitated the company consuming practically all of one floor in the present location.

Sundance Sand Has High Gravity Well at Salt Creek

Casper, Wyo.—The outstanding event during the past week in the Rocky Mountains was the completion by the Midwest Refining Company of a 5500-barrel well in the Sundance sand, northwest quarter of section 35-40-79, Salt Creek field. The significance of the completion is better brought out by recalling that, although the formation is found practically all over the state, hardly a commercial producer has been completed in any of the localities where the formation is found. One small producer had been completed in the Salt Creek field in this sand, but it was a very small well.

The first bench of the sand did not show anything of importance. The second strata was found at 2830 feet. The well was tested after the sand had been drilled a few feet. It produced at the rate of 1400 barrels daily. After deepening the well to 2870 feet, it flowed at the rate of 230 barrels per hour.

High Gravity Oil

One of the most remarkable points of the discovery was the high quality of the oil found. A test showed a gravity of better than 36 degrees, or almost as high as the oil found in the higher formations. Some of the oil produced in the first and second Wall Creek sands does not run better than 36 degrees. Judging from the small quantities of oil found in the Sundance sand in other points in the state, the Salt Creek well should have produced oil of rather a heavy variety.

In the Poison Spider field, the only other field in the state which produces from this formation, a low grade of crude is found. The wells are small and the oil is sometimes sprayed out in small quantities with the gas.

Discovery Very Important

The importance of the discovery of oil in large quantities in the Sundance sand in the Salt Creek field compares favorably with the discovery of the first producer in any of the other major sands in the field. The first, second and third Wall Creeks, the Lakota, the Morrison and the Sundance have now been proven for oil. The value of the Tensleep sand, which is out of reach in the field, has not been definitely ascertained.

Another good gas well has been completed on the Pine Mountain (Wyoming) structure by a group of Casper men, who are the first operators to have found either gas or oil free from water. The well is located on section 26-35-84 and is estimated as a 10,000,000 cubic foot producer. A month ago these same men also completed a large gas well on the same section. Several companies have drilled wells on the structure during the past ten years, but not a satisfactory completion was recorded. A large flow of gas was struck about two years ago, but the gas sand seemed to lie near a prolific water sand. It was impossible to separate the gas from the water. The structure is well defined but its oil possibilities are considered very small. Two gas lines run near the structure.

The Argo Oil Company has definitely decided to abandon its deep test of the Pilot Butte field. At different depths the well has shown unusual promise, but usually fell just short of being a commercial producer. At about 2700 feet a thin sand was picked up and the well was allowed to produce from this depth for several weeks. Gas and oil was found at deeper points. The hole was very small and troublesome. The Lakota sand carried water at 3200 feet, the depth at which the well was abandoned. Another well probably will be drilled in the field to test the possibilities of the lower horizons.

In the Raft River district, near Mata, Idaho, an oil sand is reported to have been found in what was intended for a water well. The formation was struck at 745 feet and oil immediately appeared, according to reliable reports. Drilling was immediately suspended and an effort is being made to organize a company on the strength of the strike. Small showings of oil have been found in different parts of the state but no commercial wells have been completed.

Large operators gradually are being attracted to Arizona through recent discoveries in that state. Several shallow wells have been completed and the crude is of a higher gravity than straight run gasoline. The producers have been very small. Near Wilcox, good showing of oil have been found in one of the few deep tests now drilling in the state. The general appearance of the state is vey much like New Mexico and the gravity of the crude indicates that production may be found in similar formations.

The Prairie Oil & Gas Company is abandoning its test of the Crow Indian reservation, section 18-2-29, near Billings, Montana, at a depth of 3333 ft. The well was started late last fall and unusual time has been made on the well.

Union Will Try for Seal Beach Producer

Los Angeles, Cal.—Notwithstanding the fact that the Standard Oil Company of California, the Shell Company of California, the Associated Oil Company and the Marland have tried it and failed, the Union Oil Company will attempt commercial production at Seal Beach.

The Union has obtained a 144-acre lease from the Bryant estate and will develop a block of acreage just north of the Shell Company's Bryant holdings where the latter company is allowing its Bryant No. 4 to stand idle at 4897 feet, awaiting developments in the Union's well.

For several years Seal Beach, which lies along the California coast, part in Los Angeles County and part in Orange County, has been the scene of prospecting. All companies striving to bring in a field there have secured good showings, fairly rich sands, but no commercial production. None have been able to successfully combat the water trouble. The latest attempts at development have been made by the Marland and the Shell.

Marland Oil Company's Bixby No. 1 is drilling below 5625 feet in shale and gray sand. This well is 790 feet west and 250 feet north of the south quarter of section 2, township 5 south, range 12 west.

About five-eighths of a mile southeast of the Marland well, the Shell drilled its Bryant 1 to 4620 feet, getting 40 barrels of oil and 1700 barrels of water, together with a strong gas pressure. The well could not be made to produce on a commercial basis. The same company's Bryant No. 2, located three-fourths of a mile east by south of the Marland's Bixby 1, got a rich oil sand at 5220 feet, but has never been able to effect a satisfactory water shut-off. Later the well was carried to 6139 feet, but without any encouraging results. Shell's Bryant No. 3, a mile east of the Marland's Bixby 1, continued negative in showings from the grass roots to 7222 feet. Two wells drilled by the Standard Oil Company on Bixby acreage were dry holes at 5526 feet and 5610 feet, respectively. Bixby 1 of the Standard was located a mile north by east of the Marland's Bixby 1, while Bixby 2 was located seven-eighths of a mile northeast by north of the Marland well. One and three-eighths miles southeast by east of the Marland, the Associated drilled its Hellman 1 to 5321 feet and then abandoned the test, preparatory to drilling a number of formation tests.

AVERAGE DAILY PRODUCTION FOR U.S.

United States Daily Average Production by Weeks

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

Week Ending	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Total
January 2, 1926	463,500	102,850	276,700	90,250	44,950	196,050	103,500	105,350	633,000	2,002,250
January 9	449,750	99,950	261,700	88,100	44,200	184,150	101,000	105,950	629,000	1,963,800
January 16	447,750	100,400	258,650	88,750	43,500	184,250	100,500	104,300	619,500	1,947,600
January 23	442,450	98,400	255,300	93,050	43,900	182,000	100,500	99,700	613,000	1,928,350
January 30	443,400	99,050	248,550	91,300	43,400	159,500	99,500	96,200	612,000	1,892,900
February 6	445,750	100,650	246,150	91,550	44,300	171,650	99,500	98,700	608,000	1,906,250
February 13	449,000	101,250	243,600	90,950	43,400	170,150	99,000	98,650	606,500	1,902,500
February 20	450,000	102,600	243,100	90,100	44,600	169,900	99,000	99,950	603,500	1,902,750
February 27	455,400	103,250	251,100	93,600	48,150	167,000	98,500	96,350	603,000	1,927,050
March 6	453,150	103,950	258,100	90,850	49,450	163,900	98,000	103,900	599,000	1,920,300
March 13	452,700	103,350	262,350	95,300	48,650	164,200	97,500	103,750	607,500	1,935,200
March 20	451,350	102,850	260,300	94,450	48,700	165,100	97,500	101,700	607,000	1,928,950
March 27	461,850	103,050	260,300	90,250	48,350	168,050	97,500	99,950	604,500	1,933,800
April 3	478,800	101,050	261,650	86,700	49,150	167,800	99,000	100,800	602,500	1,947,450
April 10	469,200	101,300	264,800	86,550	51,150	169,450	100,500	106,250	597,000	1,946,200
April 17	458,650	102,150	264,250	88,500	50,450	171,350	101,500	107,100	596,000	1,939,950
April 24	462,150	102,800	263,750	93,500	51,500	170,700	102,500	104,550	604,500	1,955,950
Increase over previous week	3,500	650	.....	5,000	1,050	.....	1,000	.....	8,500	16,000
Decrease over previous week	.....	.....	500	.....	.....	650	.....	2,550	.....	.....

Texas

NORTH TEXAS

	Apr. 24	Apr. 17
Burkburnett	12,350	12,300
Electra	16,250	16,200
Iowa Park and K-M-A	4,450	4,450
Wilbarger	12,850	12,850
Panhandle	8,700	8,200
Petrolia	500	450
Archer County	31,600	31,150
Others	2,000	2,000
Total	88,700	87,600

EAST CENTRAL TEXAS

Mexia	13,300	13,400
Currie	1,100	1,050
Richland	1,700	1,700
Corsicana-Powell	30,300	30,550
Wortham	9,350	9,400
Total	55,750	56,100

WEST CENTRAL TEXAS

Stephens County	13,300	13,450
Eastland County	5,950	5,950
Desdemona	2,650	2,650
Young County	7,650	7,850
Palo Pinto County	500	550
Callahan County	3,400	3,400
Shackelford County	2,750	2,750
Reagan County	33,800	34,800
Others	9,500	10,000
Total	79,550	81,400

SOUTHWEST TEXAS

Luling	22,950	22,650
Mirando	6,600	6,600
Somerset	2,150	2,150
Lytton Springs	7,200	6,850
Piedras Pintas	250	250
Others	600	650
Total	39,750	39,150
Texas outside Gulf Coast	263,750	264,250

GULF COAST

Goose Creek	8,950	8,850
Hull	18,050	18,300
Saratoga	1,150	1,200
Blue Ridge	450	450
Damon Mound	900	900
Batson	1,150	1,200
West Columbia	8,700	9,400
Humble	3,750	3,550
Pierce Junction	1,300	1,300
Sour Lake	4,050	4,050
Spindletop	3,850	4,350
Orange County	11,400	11,650
Edgerly	1,100	1,100
Evangeline	1,100	1,000
Vinton	6,250	6,250
Lockport	4,150	2,650
South Liberty	5,900	6,000
Big Creek	1,150	1,100
Boling	8,800	3,850
Others	1,350	1,250
Total	93,500	88,500

Oklahoma

North Braman	2,350	2,350
South Braman	10,350	9,500
Blackwell	3,950	3,950
Hubbard	1,850	1,850
Thomas	5,300	5,200
Tonkawa	37,200	37,800
Garber	34,600	33,150
Burbank	41,200	41,750
Osage (Outside Burbank)	32,950	32,900
Watchorn	2,450	2,450
Cushing	21,900	21,900
Yale Jennings	16,650	16,100
Davenport	15,600	17,050
Bristow-Slick	29,950	30,200
North Okmulgee	17,800	17,900
Lyons-Deanor	4,250	4,250
Stroud	2,400	2,350
Cromwell	18,200	18,500
Papoose	12,350	12,310
Wewoka	34,900	31,650
Duncan District	7,250	7,350
Graham	9,600	9,500
Fox	4,200	4,100
Healdton	14,900	14,850
Hewitt	12,200	12,100
Others	67,800	67,600
Total	462,150	458,650

Kansas

Florence-Covert	1,700	1,750
Peabody-Ebling	4,300	4,350
Eldorado-Towanda	13,850	13,900
Augusta-Fox Bush	3,750	4,750
Rainbow Bend	4,800	4,900
Russell	5,350	5,400
Greenwood County	42 400	41,750
Others	26,650	25,350
Total	102,800	102,150

North Louisiana

Homer	5,750	5,800
Haynesville	10,250	10,250
Caddo Light	8,750	8,550
Caddo Heavy	2,300	2,200
De Soto-Red River	3,900	3,950
Elm Grove	600	600
Bellevue	2,600	2,600
Cotton Valley	8,550	8,350
Urania	8,850	8,150
Total	51,500	50,450

California

	Apr. 24	Apr. 17
Santa Fe Springs	49,000	49,000
Long Beach	105,000	103,000
Huntington Beach	45,500	45,500
Torrance	27,500	28,000
Dominguez	21,000	21,500
Rosecrans	18,500	18,000
Inglewood	53,000	51,000
Midway-Sunset	93,000	93,000
Others	192,000	187,000
Total	604,500	596,000

Arkansas

El Dorado	7,400	7,400
Smackover Light	17,550	17,950
Smackover Heavy	133,400	135,200
Stephens	1,550	1,550
Nevada	3,000	3,000
Lisbon	7,800	6,250
Total	170,700	171,350

Mountain States

WYOMING

Salt Creek	52,550	55,200
Grass Creek	2,900	2,800
Elk Basin	600	600
Big Muddy	3,500	3,400
Lost Soldier	4,250	4,250
Rock River	3,100	3,000
Teapot Dome	1,150	1,350
Others	4,550	4,650
Total	72,600	75,250

MONTANA

Cat Creek	2,950	2,950
Sunburst	18,500	18,500
Total	21,450	21,450

COLORADO

Moffats (Craig)	2,800	2,900
Fort Collins	2,900	2,650
Florence	400	400
Others	500	500
Total	6,600	6,450

NEW MEXICO

Artesia	3,000	3,000
Hogback	450	450
Rattlesnake	450	500
Total	3,900	3,950
Total Rocky Mountains	104,550	107,100

EASTERN STATES

(Including Ill., Ind., Ky., Pa., Ohio, W. Va., and N. Y.)	102,500	101,500

PRODUCTION SUMMARY

East of Rockies	1,246,900	1,236,900
United States	1,955,950	1,940,000

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	24	46	19	35	2	4	3	7	3,390	4,540
California	24	16	22	13	1	..	1	3	4,207	2,978
Colorado	..	..	..	..	..	..	..	..	....	.....
Indiana	1	..	..	..	..	..	1	..	....	.....
Illinois	1	6	1	4	..	..	..	2	4	78
Kansas	27	34	20	22	..	4	7	8	4,275	2,440
Kentucky	16	19	11	15	..	..	5	4	267	518
Louisiana	18	19	15	12	..	5	3	2	7,395	1,140
Michigan	..	2	..	2	..	..	..	..	....	52
Mississippi	..	..	..	..	..	..	..	..	.....	.....
Montana	8	6	6	6	..	..	2	..	1,800	3,690
New York	5	8	4	8	..	..	1	..	9	20
New Mexico	7	..	6	..	..	..	1	..	500	.....
Ohio	48	33	28	17	9	8	11	8	579	423
Oklahoma	57	89	42	57	6	7	9	25	14,369	27,343
Pennsylvania	35	43	33	35	..	6	2	2	112	116
Tennessee	8	..	8	..	..	..	..	..	1,335	.....
Texas	134	138	73	81	9	5	52	52	20,289	31,434
Utah	..	..	..	..	..	..	..	..	.....	.....
West Virginia	27	32	13	12	10	13	4	7	180	231
Wyoming	9	9	4	8	1	..	4	1	6,385	780
Totals	449	500	305	327	38	52	106	121	65,096	75,783

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co.'s Whipple 17	2	....
Taylor 9	2	....
Petroleum Reclamation Co.'s Pratt 13	3	....
Mott 5	3	....
J. Minnich's Morse 1	3	....
T. H. Kennedy & Co.'s Bingham 490 tract 137	3	....
Associated Producers Co.'s Bingham 589 tract 369	2	....
Hazlewood Oil Co.'s Hazlewood 5	2	....
Kaber & Kaber's Kaber 36	2	....
Burdick & Wright's Bingham 374, tract 5	3	....
C. B. Kervin's Baldwin 2	3	....
T. B. Wilson's Borden 1	3	....
M. E. Jones' Taylor 9	2	....
McKay & Hooker's Franchot 5	2	....
Bovaird & Park's Bingham 540, tract 34	2	....
McDowell & Andrus' Bingham 356, tract 69	2	....
Cooper, Simpson & Co.'s Gelpin 1	3	....
Wingrove & Tapp's Borden 1	2	....
Sprague & Hifler's Keller 1	2	....
J. W. Looker's Willett 1	2	....
Devore & Co.'s Monroe 1	2	....
Leech, Wolfe & Co.'s Rew 1	2	....
P. L. Golden & Co.'s Quintuple 58	3	....
Wright & Co.'s South Penn tract 17	3	....
Venango County—		
S. P. McCalmont Estate's Jacobs 15	2	....
H. C. Graham's Grove 11	2	....
Citizens Banking Co.'s Ferringer 8	2	....
C. B. Kern's Kern 14	2	....
A. T. Straub's McCandless 52	2	....
Butler County—		
J. A. Elliott's Goehring 4	*	....
Ruby & Ingold's Hockenberry 1	*	....
Rankin, Benton & Co.'s Rankin 1	2	....
Greene County—		
Manufacturers Light & Heat Co.'s J. W. Glosser 2	40	....
Covert Bros.'s B. Loar 1	2	3503
Center-Middle Filed—		
Frost Bros.'s Samuelson 2	2	....

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
Allegany County—		
Maitland & Co.'s Maitland 1	2	....
C. C. Brennan & Co.'s Brennan 1	2	....
Brennan 2	*	....
Homestead Oil Co.'s Homestead 1	3	....
W. B. Davidson & Co.'s Cass 1	2	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
Clay County—		
Empire Petroleum Co.'s Charles Osborne 1	¶1	....
South Penn Oil Co.'s R. S. Kyle 1	30	....
South Penn Oil Co.'s O. D. Stockley 18	10	....
O. D. Stockley 19	35	....
Virginia Gasoline & Oil Co.'s Sinnett 5	30	....
Doddridge County—		
L. H. Williams & Co.'s C. Williams 3	20	....
Pittsburg & West Virginia Gas Co.'s W. A. Duckworth 1	10	....
Clifton Oil & Gas Co.'s Joseph Freeman 21	3	....
Wood County—		
Coplan Oil Co.'s J. W. Copland 2	5	....
Ruth Oil Co.'s Uhl 3	2	....
South Penn Oil Co.'s Grant Heirs 4	2	....
Roane County—		
Heck Oil Co.'s D. H. Borroughs 3	10	....
B. L. Morford 1	¶2	....
Big Injun Oil & Gas Co.'s P. Painter 1	¶1	....
Calhoun County—		
Grantsville Oil & Gas Co.'s Ida McCoy 1	¶2½	....
Hope Construction & Refg. Co.'s Okey Parsons 1	20	....
Ritchie County—		
Hope Natural Gas Co.'s L. L. Batson 1	¶1½	....
American Oil & Development Co.'s W. H. Maze 2	3	....
Harrison County—		
Norwood Gas Co.'s Consolidated Coal Co. 1	¶2	....
R. T. Lowndes' Lowndes 5	*	....
Kanawha County—		
United Fuel Gas Co.'s Hulings-Cobb 1	¶1	....
Braxton County—		
Ohio Fuel Oil Co.'s W. H. Campbell 2	¶2½	....
Putnam County—		
Ohio Fuel Oil Co.'s F. G. Hanley 2	¶¼	....
Marshall County—		
Hope Construction & Refg. Co.'s C. E. Yeater 1	¶2½	....
Gilmer County—		
Pittsburg & West Virginia Gas Co.'s J. F. Carson 1	*	....
Marion County—		
Pleasants Oil & Gas Co.'s Joseph M. Fleming 1	*	....
Cabell County—		
Commercial Gas Co.'s Charles Morrison 1	*	3850

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
Barren County—		
Esslinger Oil Co.'s C. B. Jones 3	5	...
Hiland Oil & Gas Co.'s Casaday 15	10	....
Lynch & Co.'s Matthews 1	8	....
Jacob Best's Trustee Sanders 5	*	....
Wood Oil Co.'s Sink Smith 1	*	....
Owensboro District—		
Loman & Bolling's J. R. Ellis 1	30	....
C. A. Leeper & Co.'s Lon Helm 7	125	....
C. E. Daugherty & Co.'s Widow Crowe 9	25	....
Davis County Oil Co.'s J. L. Howard 7	*	....
Allen County—		
Owens & Co.'s Davenport 7	2	345
R. A. Stohr's W. L. Motley 6	1	380
American National Bank & Co.'s Phoebe Oliver 13	1	318
West Penn Oil Co.'s G. W. Pearson 12	*	340
Cumberland and Monroe Counties—		
Dr. Lang's John Finley 1	*	....
A. S. McClintock's, Atty. Millard Kerr 10	5	....
Wolfe County—		
Petroleum Exploration Co.'s Miller-Pruitt-Goff 12	10	....

TENNESSEE

Company, Well and Location	Initial Production Bbls.	Depth
Clay County—		
H. Z. Clark & Co.'s J. M. Gray 1	500	302
J. M. Gray 2	500	334
Stone heirs 1	50	446
James Arms 1	60	448
Carnahan & Horn's Coffie-Dennis 1	150	....
Dixon, Baylis & Douglass' A. T. Davis 1	25	502
A. T. Davis 2	40	496
Dafoe & Co.'s Hamp Lynn 8	10	431

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Washington County—		
Preston Oil Co.'s C. C. Pugh 5	2	....
Lena B. Clymer & Co.'s W. T. Schram 2	50	....
Dent & Co.'s H. W. Proctor 1	¶¼	....
Henderson & Co.'s B. F. Gitchell 1	30	....
West & Co.'s Phillip Bowersock 1	*	....
F. A. Metcalf's Hannah Finn 1	*	80
W. C. Patterson & Co.'s G. W. Schmidt 4	*	500
Morgan County—		
Swingle Oil & Gas Co.'s D. F. Stoneburner 1	¶¼	....
The Sun Co.'s Joseph Longstreth 5	¶1	....
C. W. Swytzer 17	20	....
Noble County—		
Way Wickers & Co.'s John Crock 1	*	....
R. L. Hanlon & Co.'s John & Nat Cisler 2	*	....
Jefferson County—		
Featner & Co.'s McCullough Bros. 4	15	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Hocking County—		
Kachelmacher Estate's James T. Tracey 20	100	3283
A. H. Squires' Cobb-Bradley 14	75	....
Ohio Fuel Supply Co.'s George Miller 2	47	....
Schneider Oil Co.'s Jacob Schneider 1	30	....
Preston Oil Co.'s Emma C. Plucarp 1	10	....
Ohio Falls Oil & Gas Supply Co.'s John Hoskins 3	*	2750
Lickinc County—		
F. M. Rugg & Co.'s Clinton S. McKinney 4	6	....
Dexter Oil & Gas Co.'s G. E. Cotterman 6	4	....
Ohio Fuel Supply Co.'s Orphia Hansberger 1	10	....
Athens County—		
Ohio Oil Co.'s Dr. Alderman 3	10	....
Ohio Oil & Gas Co.'s Julia Gift 2	*	....
Brooks Oil & Gas Co.'s Dusker Russ 1	*	....
Wayne County—		
Warren Palmer & Co.'s S. A. Swanson 2	¶3½	....
The Ohio Oil Co.'s Lee Martin 2	25	....
Knox County—		
Arkansas Fuel Oil Co.'s Harry Hall 1	12	....
East Ohio Gas Co.'s John Sniveley 16	3	....
Ashland County—		
Ohio Fuel Gas Co.'s John E. Shoudt 1	¶1	....
Hulse & Kundtz's R. H. Hartsmiller 1	¶1	....
Lorain County—		
Daugherty Bros.' E. E. Churchwood 2	¶¼	....
The Wiser Oil Co.'s Charles Brozek 1	¶½	....
Cochocton County—		
Bell Bros. & Cassingham's Cassingham-Herbig 10	¶¼	....
East Ohio Gas Co.'s John Conkle 2	*	....
Columbiana County—		
John M. Davidson & Co.'s Henry Cameron 1	*	....
Homeworth Parties' C. Unger 1	*	....
Tuscarawas County—		
Stillwater Oil & Gas Co.'s Frank A. Morrison 2	3	....
Medina County—		
E. R. Edson Son Co.'s Geo. W. Packard 2, tract 19	1	380

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Sandusky County—		
Hurry Up Oil Co.'s W. D. Hummell 6	12	1318
Harley, Warner & Henderson's C. Flack 5	10	1344
B. J. Rinebold's Reinbold 8	2	1291
Auglaize County—		
Rock Oil Co.'s C. Enneking 1	50	1286
Kelley Bros.' James Harshbarger 1	15	1224
Hancock County—		
Star & Clark's Allice Stauffer 8	20	1385
Wood County—		
Oko Oil & Gas Co.'s George Deverna 4	9	1291
Ottawa County—		
River Oil Co.'s E. Bussman 8	8	1303
Mercer County—		
N. E. Masters' Harry S. Lewis 2	1	1190

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
Pike County—		
Loeb & Skidmore's Ralph Robling 1	*	1398

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
Clark County—		
The Ohio Oil Co.'s Samuel James 24	4	527

Mountain States

WYOMING

Company, Well and Location	Initial Production Bbls.	Depth
Salt Creek—		
Wyoming Associated Oil Co.'s 34X NW¼ 35-40-79	5500	2870
No. 16, NE¼ 26-40-79	500	1125
Wyoming Oil Fields Co.'s No. 31, SW¼ 24-40-79	350	1120
Pine Mountain—		
Brennan-White Syndicate's No. 2, 26-35-84	¶	1800
Pilot Butte—		
Argo Oil Co.'s No. 8DE, 27-3-1	*	3200
Eight Mile Lake—		
Producers & Refiners Corp. No. 1H, 2-19-88	*	3967
Sugar Creek—		
Producers & Refiners Corp.'s No. 1, 36-22-86	*	2202
Grass Creek—		
Ohio Oil Co.'s No. 68M, 20-46-98	35	3101
Lovell—		
California Co.'s No. 2	*	4005

MONTANA

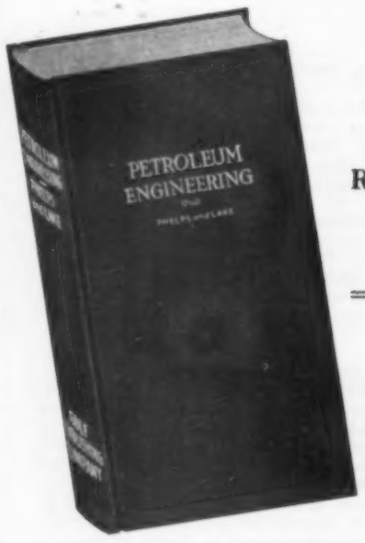
Company, Well and Location	Initial Production Bbls.	Depth
Crow Reservation—		
Prairie Oil & Gas Co.'s No. 1, 18-2-29	*	3333
Kevin-Sunburst—		
Ohio Oil Co.'s No. 28, 11-35-2	10	1583
Tri-State Oil Co.'s No. 2, NE¼ 30-35-1	300	1475
Dakota-Montana Oil Co.'s No. 8E, NW¼ 31-35-1	30	1430
Rice Oil Co.'s No. 6S, SW¼ 30-35-1	310	1480
Ferdig Oil Co.'s No. 1A, NW¼ 35-35-2	*	1500
Glacier Oil Co.'s No. 1L, NW¼ 1-34-2	350	1469
Homestake Oil Co.'s No. 7S NE¼ 36-35-2	800	1450

NEW MEXICO

Company, Well and Location	Initial Production Bbls.	Depth
Eddy County—		
Ohio Oil Co.'s No. 1M, 5-18-28	25	2200
No. 1S, 8-18-28	100	2555
No. 1TA, 22-18-28	*	2324
Levers-Wilson No. 5, SE¼ 18-18-28	100	2190
Pilcher Oil Co.'s No. 2, 12-18-27	40	2300
A. H. Ramage Co.'s No. 1, SE¼ 2-18-28	35	2662
Mesa Oil Co.'s No. 1M, 19-18-28	200	2845

California

Company, Well and Location	Initial Production Bbls.	Depth
Long Beach—		
Craig Burns' Cerritos 18	100	4460
E. L. Craigen's No. 3	125	4455
A. J. Delaney's No. 31	¶1½	2835
Featherstone-Preston's Cerritos 16	150	4475
Henderson Pet. Corp.'s Cerritos 25	75	4485
Julian Pet. Corp.'s Parks 2	50	4450



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Company, Well and Location	Initial Production Bbls.	Depth
W. I. Lake's Los Cerritos 2	135	4425
Lindauer Oil Co.'s Cerritos 7	125	4410
McKeon Oil Co.'s Pantages 1	100	4420
Northwest Gasoline Co.'s Cerritos 1	100	4420
W. H. Playter's No. 1	125	4423
Athens-Rosecrans—		
Associated Oil Co.'s Wanka 2	300	4800
Union Oil Co.'s Howard Park 22..	*	4457
Baldwin Hills—Inglewood—		
Standard Oil Co.'s L. A. Investment Co. 1-43	530	2270
Baldwin Cienega 51	400	2218
Torrance—		
Chanslor-Canfield Midway Oil Co.'s Del Amo 29	46	3660
Huntington Beach—		
Standard Oil Co.'s Jones Community 4	206	2834
Montebello—		
McGinley Oil Co.'s No. 6	175	3450
Brea-Richfield—		
Union Oil Co.'s Chapman 24	75	4852
Kern Front—		
Geo. F. Getty's Lenhart 6	150	2133
Midway District—		
North American Con.'s No. 31	350	3845
No. 33	290	3950
Standard Oil Co.'s No. 59	500	4490
Wheeler—		
Standard Oil Co.'s No. 23	100	2500

Kansas

Company, Well and Location	Initial Production Bbls.	Depth
Butler County—		
Lewis Oil Co.'s Laughlin 2, NEc SE NW NE 33-27-7e	65	2745
Connell et al, Pettit 1, NEc 20-28-6e	240	3143
Manhattan Oil Corp.'s Teter 1, NWc NE SE 12-26-6e	*	2835
Atlantic Oil Prod. Co.'s Sensenbaugh 3, SWc SE SW 15-28-7e	*	3141
Cowley County—		
Gypsy Oil Co.'s Hunt 3, NWc SE SE SW 16-33-3e	65	3215
Waite Phillips & Marland Oil Co.'s H. Thurlow 8, SEc SW SW 16-33-3e	125	3212
Roxana Pet. Corp.'s Vickery 1, SEc SW SE 7-35-3e	*	3865
Chase County—		
Liggett et al's Griffeth 1, owd NEc SW 19-21-6e	*	2605
Elk County—		
Southwestern Gas Co.'s Webb 11, NEc SW NE 14-31-10e	125	1339
Greenwood County—		
Kanson Oil Co.'s Atyeo 2, SWc NW NE 6-22-10e	400	2292
Mid-Kansas Oil & Gas Co.'s Pixlee 3, SEc NW NW 8-22-10e	240	2350
Ladd 5, SEc NE NE 19-25-9e	50	2418
McGinnis et al's Wiggens 4, SEc SW 19-24-11e	40	1855
Davis, Hazlett et al's De Malorie 14, NWc SE NE 12-22-10e	300	2054
White Eagle Oil & Ref. Co.'s Austin 2, SEc NW 12-22-10e	250	2142
Phillips Pet. Corp.'s Warrensburg 6, NEc SW 12-22-10e	100	2127
Hilliard 7, SWc NE SW 33-22-11e	50	1931
Mosby 3, NEc SE 26-23-8e	35	2494
Skelly Oil Co.'s Yeager 1, NEc NW 4-23-11e	240	1927
Arkansas Fuel Oil Co.'s Marshall 14, NWc SW NE SW 1-24-9e	50	2336
Roth & Farrot's Birkett 9, NEc SW NW 12-25-8e	*	2384
Prairie Oil & Gas Co.'s Gilroy 1, owd, NE SE SE 7-35-12e	*	1660
Lyon County—		
Super Six Oil Co.'s Roseillion 2, C WL SE SE 24-21-10e	250	2600
McCullough et al's Bradford 1, NWc NE NW 25-21-10e	1100	2596
Transcontinental Oil Co.'s Atyeo 2, SWc SE SW 30-21-10e	350	2186
Russell County—		
Valerius Oil & Gas Co.'s Oswald-Valerius 16, SEc SW NW 17-12-15w	200	3019
Sedgwick County—		
Waite Phillips' Nicholson 1, SWc NE 32-29-2w	*	3771

Oklahoma

Company, Well and Location	Initial Production Bbls.	Depth
Carter County—		
Atlantic Oil Prod. Co.'s Eason 1, C NW SW NE 19-1s-3w	¶72	3176
Twin State Oil Co.'s Carpenter 3, C NW NE NW 22-2s-3w	300	3115
Coline Oil Co.'s Pierce 8, C NE NW SE 7-2s-2w	65	1835
Higgins 4, C NW NW NE 7-2s-2w	¶5	1490
Magnolia Pet. Co.'s Wilson 1, C NE SE SE 16-2s-2w	54	1335
Amerada Pet. Corp.'s Westheimer 13, C SL NH SE NW 28-5s-1e	75	1291
Comanche County—		
Continental Oil Co.'s Indian 1, owd C NW NW SE 30-2n-9w	10	2039
Creek County—		
Gled Oil Co.'s Ross 2, SEc SW 13-19-8e	175	2306
Sinclair Oil & Gas Co.'s Dacon 13, NEc SE SE 16-17-7e	10	2863
Savoy Oil Co.'s Johnson 3, C EL NW SE 22-17-8e	25	2355
Wells & Thornton's Unallotted 1-A owd, NWc 10-18-11e	35	1887
Ind. Oil & Gas Co.'s Dickson 1, SWc SE SW 19-17-10e	40	2140
J. H. Wright's Dawson 10, C NL SE SW 24-17-10e	10	1878
S. J. Smith's Fife 1, owd, NEc SW 3-17-11e	10	1830
I. Simmons' Watkins 1-A, NEc NW SE 28-17-11e	8	1806
Transcontinental Oil Co.'s Barnett 2, C EL SW NE 28-17-11e	22	1714
Prairie Oil & Gas Co.'s Washington 9, NEc NW SW SW 32-17-8e	35	2355
Hope 1, SEc SW 3-17-9e	75	2026
Garfield County—		
Sinclair Oil & Gas Co.'s Walker 37, C NW NE NE 13-22-4w	750	3585
Roxana Pet. Corp.'s Schroeder 1-L, SWc 18-22-3w	4568	3038
Grady County—		
Manderville et al's Goldsmith 1, SEc 15-5n-8w	¶25	2457
Becker-Reed Oil Co.'s Thomas 1, C SE NW 8-5n-6w	*	3056
Hughes County—		
Amerada Pet. Corp.'s P. Harjo 3, SWc NE NW 5-7-8e	5700	4158
Jefferson County—		
Gypsy Oil Co.'s Seay 18, SWc NW SW NE 33-6s-5w	240	1448
Kay County—		
Marland Oil Co.'s Robinson 2, C NW SE 17-27-1w	*	....
Lincoln County—		
Gypsy Oil Co.'s Caves 9, NWc SE 35-15-5e	275	3408
Mid-Continent Pet. Corp.'s Earp 1, NWc 8-15-16e	10	4050
The Texas Co.'s Hopkins 1, NWc SE SE 2-14-5e	350	3436
McIntosh County—		
Gypsy Oil Co.'s R. E. Lynch 2, SEc SW SW 17-10-14e	*	4463
Muskogee County—		
C. M. Bradley's E. M. Garrett 1, NEc NW 33-15-18e	*	1561
Okfuskee County—		
Central Nat. Oil Co.'s Johnson 1, NEc SE 28-12-10e	65	2965
Okmulgee County—		
Shafter Oil & Ref. Co.'s Gibson 7, SWc SE SE 17-15-11e	520	2986
C. O. Buckies' Jackson 16, C SL NE NW 5-11-12e	2	1667
Transcontinental Oil Co.'s E. Beams 1, NEc SE 4-15-14e	¶10	1517
Cumberland Pet. Co.'s T. Dunn 4, NWc SW NW 21-13-14e	¶20	1740
Ind. Oil & Gas Co.'s Charles 11, C EL NW SW 1-15-14e	*	2206
O. Henson's McNack 1, NEc SE 23-13-15e	*	2990
Prairie Oil & Gas Co.'s Brazeel 2, NWc SE SE 17-13-11e	*	3301
Osage County—		
Skelly Oil Co.'s No. 7, NEc SW 2-27-5e	150	2999
Mid-Kansas Oil & Gas Co.'s No. 10, NE SW NW 26-27-5e	80	2980
Kewanee Oil Co.'s No. 14, C NE SE SE 18-27-6e	80	2980
Devonion & Tidal Oil Co.'s No. 1, C WL SE 27-21-10e	20	1950
Sidwell et al's No. 15, owd, C EL NE 35-24-8e	*	2499
Pawnee County—		
Gypsy Oil Co.'s Norman 7, NEc 35-21-8e owd	4	2360
Minnehoma Oil Co.'s Childers 4, SEc NE NW 7-20-8e	35	2370
Shaffer Oil & Ref. Co.'s Stoneham 3, SEc 28-20-9e	25	2687
The Texas Co.'s Wells-Jones 21, owd, SEc NE NW 35-21-8e	*	2458
Payne County—		
Deep Rock Oil & Gas Co.'s Posey 1, C NL SE NE SE 23-18-3e	75	4287
Pottawatomie County—		
Magnolia Pet. Co.'s Vienx 1, C NE SE SE 13-7n-4e	23	4068
Seminole County—		
Prairie Oil & Gas Co.'s No. 1, owd, SWc SE NE 25-8n-7e	28	3076
Stephens County—		
Carter Oil Co.'s Knox-Simms 2, NEc NW NW 2-2n-5w	15	1491
Tulsa County—		
L. Green et al's Flippen 1-A, C NE SW 28-18-14e	100	1468
J. H. Hilt et al's Oswalt 1-A, SEc SW NW 6-17-13e	15	1896
Holmes et al's Owens 1, C EL NE SW 11-17-13e	25	1478
Thompson & Black's Bertholf 4, C SW SW 5-16-13e	265	2133
Wagoner County—		
Mitchell Oil Co.'s A. Samuels 1, NWc NE NW 6-16-17e	¶2	1449
Flint Ridge Oil Co.'s Murrell 2, SEc SW SE 20-18-17e	*	1465

Arkansas

Company, Well and Location	Initial Production Bbls.	Depth
Stephens Field, Ouachita County—		
Reynolds et al's Davis 1, 22-15-19..	*	1520
Irma Field, Nevada County—		
Smitherman & McDonald's Waters 3, 2-14-21	190	1165
El Dorado East Field, Union County—		
Grimes & Jones' Lovett 1, 6-18-14..	¶10	2189
14	¶10	2189
Lisbon Field, Union County—		
Atlantic Oil Prod. Co.'s Andres 4, 16-17-16	65	2135
Slaughter 5, 9-17-16	150	2106
Bond & Evans' Kilgore 1, 4-17-16..	75	2155
Lion Oil & Ref. Co.'s Goodwin 3, 16-17-16	800	2124
Long et al's White 1, 17-17-16	¶5	2111
Miller & Cottingham's Slaughter 2, 9-17-16	100	2120
Slaughter 3, 9-17-16	175	2150
Owens et al's Slaughter 2, 4-17-16	250	2154
Porter 1, 4-17-16	*	2665
Pure Oil Co.'s Dumas 2, 9-17-16	70	2109
Wingfield et al's Cruse 1, 27-17-16	*	3008
Dumas A-3, 9-17-16	600	2126
Slaughter A-1, 9-17-16	125	2116
Slaughter 6, 9-17-16	165	2108
Total, 14 wells	¶5-2575	
Smackover Field, Ouachita County—		
Magnolia Pet. Co.'s Shirey 3, 30-15-16	35	2281
Sinclair Oil Co.'s Flannigan 9, 6-16-15	150	2572
Smackover Field, Union County—		
Broderick & Calvert's Murphy B-6, 8-16-15	250	2426
Federal Pet. Co.'s Wells B-2, 15-16-15	100	2617
Lion Oil & Ref. Co.'s Wilson 1, 17-16-15	50	2514
Thurman et al's Houston 2, 12-16-16	80	2558
Unity Pet. Co.'s Bilyieu A-8, 8-16-15	150	2408
Total, 7 wells	815	

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Louisiana

Company, Well and Location	Initial Production Bbls.	Depth
Bellevue Field—		
Autrey Oil Co.'s Snyder 1, 22-19-11	5	433
Caddo Parish—		
Magnolia Pet. Co.'s Raines 23, 22-21-15	45	1672
B. L. Spell Trust's Thigpen & Herold 1, 10-21-16	*	1620
The Texas Co.'s Russell 11, 3-20-16	50	2295
Total, 3 wells	95	
Urania Field, La Salle Parish—		
O. W. Clark Trust's Russell 1, 25-10-1e	150	1552
Dixie Oil Co.'s Urania Lumber Co. 4, 24-10-1e	20	1568
Greenwall et al's Tyler 1, 26-10-1e	100	1535
H. L. Hunt's State 1, 26-10-1e	10	1500
Tullos 7, 26-10-1e	60	1492
Love et al's Zimmerman 2, 25-10-1e	150	1508
Louisiana Oil Ref. Corp.'s Tremont A-5, 35-10-1e	180	1554
Natural Gas & Fuel Corp.'s Tullos 5, 26-10-1e	400	1494
Roberts et al's Russell 3, 25-10-1e	90	....
Rowe et al's Urania Lumber Co. 1, 5-10-2e	*	1717
Standard Oil Co.'s Urania Lumber Co. 3, 19-10-2e	40	1556
Total, 11 wells	1200	

Texas

ARCHER COUNTY

Atlantic & Camp O. & G. Co. Rachuig 4	10	1182
Lester Burns et al L. F. Wilson 1 (Sec. 63)	*	1655
Flowers et al McCarty 1	*	1507
Gulf Prod. Co. A. P. Nichols 33	55	1554
A. P. Nichols 34	50	1566
B. R. Jeske 3	6	1180
B. R. Jeske 4	90	1169
M. W. Jackson 7-A	60	1554
H. L. Ward et al 2	*	4021
Power Banking Co. 6	90	1407
Humble O. & R. Co. Hamilton 8	60	1248
Parrish 10-B	15	1578
Wolf 4	80	1357
Hammond-Hines et al Richardson 1	25	1403
Ted Harris et al Conner 1	*	1350
Ilseng Prod. Co. Prideaux 2 (Lot 16)	35	648
Maer-Staniforth et al J. W. Prescott 1	*	2002
Pandem Oil Corp. Coffield 1	*	1455
Riner-Bailey et al H. W. Preston 1	*	1660
Rowe Drilling Co. Hutcheson 1	*	1470
Shaw-Rathke et al Prideaux 1	55	652
Sorsfield-Maxwell et al R. L. Sloop 1	*	990
The Texas Co. B. R. Jeske 9	60	1170
B. R. Jeske 10	250	1163
Richardson 8	135	1394
Wright 1	20	1400
Texhoma O. & R. Co. Wolf 4-B	*	1401
Hamilton 9	300	1800
Abercrombie 2-A	*	1415
Tidal Oil Co. Terrell 1	*	708

BROWN COUNTY

Anderson-McCamey et al Williams 1	*	2800
Barbour Oil Co. Prather 4-A	10	1319
Barkley-Conway et al Dunn 8	30	1133
Conway Bros. et al Chamber 6	250	1306
J. S. Cosden et al Westerman 7	100	1290
Westerman 8	*	1330
Williams 2-A	80	1156
Hepburn Oil Co. Gaines 2	8	1333
Mahlstedt Oil Co. Eubanks 1	*	1235
Prairie O. & G. Co. Gaines 14	50	1277
Newton 6	*	1333
States Oil Corp. Allen 2-C	*	1315
Allen 3-C	*	1339

CALLAHAN COUNTY

Canyon O. & G. Co. Barr 4	15	1438
Derrington 1	100	1410
Mook-Texas Oil Co. Baum 1	¶1	1633

COLEMAN COUNTY

Evans-J. K. Hughes et al Vaughn 1	¶1½-5	948
Raney et al Overall 1	*	1405

COMANCHE COUNTY

Milham Corp. Powers 1	*	3120

EASTLAND COUNTY

Goodwin-White et al Brunell 1	*	3362
Prairie O. & G. Co. Brelsford 2	*	3335
Robert Oil Corp. Brashear 1	*	3450

SHACKELFORD COUNTY

Dunbar et al Matthews 1	*	1002
Roeser-Pendleton, Inc. W. I. Cook 1-B (Sec. 85)	1760	1235

STEPHENS COUNTY

Eidson et al Crowley 4	10	1882
Mook-Texas Oil Co. Head 4	*	2228
Walker-Caldwell Oil Prod. Co. Keathley 1	*	3545

BIG LAKE

Texas Oil & Land Co. University 1-B	350	2469

ELECTRA

Atlantic Oil Prod. Co. et al Waggoner 1-G	*	2007
Dale Oil Corp. Jennings 21	*	1850
Gulf Prod. Co. Burnett 37-A	*	1989
Forbes-Burnett 19	20	1588
Humble O. & R. Co. Waggoner 3-D	10	598
Wagonner-Mitchell 3	5	331
John O'Neil et al Rio Bravo 24	*	2417
Roberts 3	*	1945
Petroleum Prod. Co. Douglas 3	75	1625
Ryan Pet. Co. G. E. Nance 59	35	1219
G. E. Nance 60	60	1235
United Prod. Co. Snow 12	*	1875

K-M-A AND IOWA PARK

Fisher-Gilliland et al Chilson 1	*	1821
Petroleum & United Prod. Co. Dutton 1	*	1850
Simms Oil Co. Dutton 2-A	*	1830

SOUTH VERNON DISTRICT

Barkley-Meadows et al Bond 1	*	2020
Empire G. & F. Co. Stephens 18, dd	200	2287
Stephens 30	125	2330
Stephens 36	75	1264
Milham Corp. Waggoner 2-B, dd	200	2549
Waggoner 2-L	200	1924
Murchison-Pigg et al Ditto 3	*	2710
Phillips Pet. Co. Waggoner 6-G	200	1873

MITCHELL COUNTY

Eastland Oil Co. & Gulf Prod. Co. J. J. Handley 1	25	3110

BURKBURNETT

Magnolia Pet. Co. S. L. C. Pratt 16	10	804

MEXIA

Magnolia Pet. Co. J. Desenberg 8	25	2963

PANHANDLE DISTRICT

Hutchinson County—		
American Ref. Co. J. A. Whittenberg 1	50	2808
J. B. Dunnigan et al J. A. Whittenberg 1	1000	3035
Phillips Pet. Co. et al Smith 3	240	2862
Johnson 1 (Tract No. 7)	1600	2982
Moore County—		
Moore County Oil Co. Sneed 1	†	530

MONTAGUE COUNTY

Lash-McCall & Kilcrease R. Hinds 2	60	980

THROCKMORTON COUNTY

Associated Pet. Co. Kelley 2	*	1000
Cummings 3	*	1000

YOUNG COUNTY

Atlantic Oil Prod. Co. Rachuig 2-B	200	1174
Bridwell-Heydrick et al Street 6	*	1340
Farmer 5	10	1039
Roy I Carter et al Benson 7	125	928
Clark et al Leath 2	25	1007
Gulf Prod. Co. R. Campbell 7-A	10	926
P. F. Gwynn et al Winkler 1	*	1302
Howard Pet. Co. Stewart 1	100	558
Nash & Windfohr Oil Co. Williams 3-B	75	2464
Plains Prod. Co. Farrow 2	*	1140

SOUTHWEST TEXAS

Mirando—		
O. W. Killam No. 1 Bob Hinnantn	¶	2100
No. 6, blk 3	¶	1749
K. & S. Corporation No. 28 Holbein	¶	2141
No. 1 Weber	500	2130
Moody-Seagraves No. 4 Palacious	500	1326
No. 2, blk 5	¶	1800
Cole Petroleum Company No. 17	118	....
Crown Pet. Co.'s Keene No. 1, blk 17	1000	....
No. 1, blk 18	300	1710
Sun Oil Co.'s No. 1 Arispe, blk 45	¶	....
Stanly Wynne No. 2 Bruni	432	1718

GULF COAST

Goose Creek—		
The Sun Co.'s No. 18-B Smith	250	2500
Sour Lake—		
Lake View Oil Co.'s No. 47 Hardin Company	*	2175
Hull—		
Republic Production Co.'s Dolbear 119	125	2800
Mecom Oil Co.'s No. 8 Taylor (wo)	175	3750
Gulf Production Co.'s No. 66 Phoenix Dev. Co.'	1130	3700
South Liberty—		
Associated Oil Co.'s No. 2 Deussen Fee "A" (wo)	15	3550
West Columbia—		
George Hyde Production Co.'s No. 1 Masterson	25	3250
Blue Ridge—		
Gulf Production Co.'s No. 6 L. W. Luscher (wo)	50	3800
No. 13 Bassett Blakely "C"	850	3800
Boling—		
Humble O. & R. Co.'s No. 5 Hawes	4100	3000
Oxford Oil Co.'s No. 2 Floyd	1800	2975

NORTH TEXAS

Richland—		
The Sun Company No. 1 A. M. Swink	*	830
Powell—		
De Armand et al's No. 1 Elliott	*	3025
Penn & Black et al's No. 1 Kenner	*	1860

SOUTH LOUISIANA

Evangeline—		
Gulf Ref. Co. of Louisiana No. 38 Jennings-Clement (wo)	*	1775
Lockport—		
Vacuum-Gulf Company No. 5 Miller	4100	4800
No. 2 Frieberg & Wolf	2000	3400

Acquires Large Lease in Northeastern Mexico

Fort Worth, Texas.—Leases on 4,000,000 acres of land in the State of Coahuila, in Northeastern Mexico, have been acquired by the Mid-Kansas Oil and Gas Company, which is the Mid-Continent producing subsidiary of the Ohio Oil Company, from the Hoffer Oil Corporation of Fort Worth and associates, and the exploration of the properties is to start immediately.

The Ohio-Mexico Oil Corporation, S. A., has been formed under the laws of Mexico to carry out the proposed wildcat work on the Coahuila acreage, and the Mid-Kansas Oil and Gas Company holds about 60 per cent of the stock, while the remainder is held by the Hoffer Oil Corporation and others.

The Mexican acreage involved is located from 100 to 150 miles west and southwest of Eagle Pass, Texas, and is divided into seven tracts covering the following ranches: San Marcos, Hermanos, Ocampo and Falcon, Palos Blancos, Armandaiz, Carranza and Martinez, and the Zambrano ranch. The Hoffer Oil Corporation acquired controlling interest on the leases covering the San Marcos and Hermanos ranches from Ex-Senator T. S. Hogan of Montana some months ago, and then organized a leasing firm known as the Coahuila Petroleum Exploration Company to acquire leases on the remainder of the ranches, with Mexican interests holding an interest in the latter concern.

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two geological parties checking over the geological reports made by other concerns previous to the acquisition of the acreage, while the Mid-Kansas Oil and Gas Company has since sent three parties, headed by Charles Hares, to Coahuila for a more detailed report on the area held under lease.

A number of well defined structures are known to exist on the various tracts, and the original drilling contract made by the Hoffer Oil Corporation for the drilling of a 3500-foot cable tool test on the San Marcos ranch has been assumed by the Mid-Kansas. Craig & Martin, drilling contractors of Tampico, Mexico, have taken a turn-key contract to drill the first test, and are now moving in materials to the town of Cuatro Cienegas, which is the nearest point on the Mexican National Railroad to the drilling site. The drilling of additional wildcat tests will take place later.

WILDCATS FROM ALL SECTIONS

Coastal Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Brazoria County—		
Roxana Pet. Corp.'s Clemens 1....	*	4518
Fort Bend County—		
Gulf Prod. Co.'s Davis 10	*	790

DRILLING REPORT

BRAZORIA COUNTY—Roxana Pet. Corp.'s Clemens 1, abn 4518 ft; Kropp 2, 1041 ft S Kropp 1, 169 ft from S line and 1150 ft from E line of R. R. Kropp 100 acres, dr 319 ft in gumbo; Allen 2, r 2650 ft, td 3518 ft.. Rycade Oil Corp.'s Nash 6, Nash Dome, dr 3886 ft in gumbo; Nash 7, Nash Dome, r 4257 ft, shale. Wisdom 2, Nash Dome, dr 4084 ft in hard sand, so show; Wisdom 6, dr 1739 ft in hard lime.

COLORADO COUNTY—R. C. Timms et al's Drumgould 1, Eagle Lake, no report.

FORT BEND COUNTY—Rycade Oil Corp.'s Flessner 2, Nash Dome, bailing 29 ft oil sand, td 4058 ft. Flessner 3, Nash Dome, dr 2292 ft in gumbo. Gulf Prod. Co.'s Moore 6, Orchard, 3100 ft in sandy shale, no show. Davis 8, Long Point, dr 3610 ft in hard sand. Davis 10, abn 790 ft. Davis 11, Long Point, lcn. Sun Co.'s Farmer 1, Boling, rigging up. The Texas Co.'s Farmer 1, Boling, lcn.

GALVESTON COUNTY—Gulf Prod. Co.'s Smith 5, High Island, waiting on cement to set, 3100 ft.

GOLIAD COUNTY—Houston Oil Co.'s Parks 1, Goliad.

GRIMES COUNTY—New Block Oil Co.'s Cuthrell 1, Carlos, dk.

HARDIN COUNTY—Vacuum Oil Co.'s Teel 3, Saratoga, dr 3727 ft, water sand. Rio Bravo Oil Co.'s Fountain 5, Saratoga, fsh 3820 ft. Humble O. & R. Co.'s Weise 2-A, dr 1021 ft in sand rock. Humphrey Oil Corp.'s Jackson 1, Sour Lake, dr 3020 ft in gumbo. Texas Little Farm's Hawley 1, Saratoga, sd 2951 ft. Sun Co.'s Libby 1, Sour Lake, dr 317 ft in gumbo.

HARRIS COUNTY—Rio Bravo Oil Co.'s Pierce Fee 2, Pierce Junction, dk.

LIBERTY COUNTY—Humble O. & R. Co.'s Welder 1, South Dayton, rigging.

JEFFERSON COUNTY—Houston Oil Co.'s Pipkin Davis 1, Big Hill, dr 2236 ft in hard lime. Gulf Prod. Co.'s Burrell 1, Fannettte, dr 4291 ft in sandy shale and lime; Bordages 2, Fannette, dr 2605 ft in hard lime rock. Yount-Lee Oil Co.'s McFaddin 5, 300 ft. W No. 4, Spindletop, rigging up; Gladys City 4, 300 ft SE No. 3, Spindletop, rigging up.

MATAGORDA COUNTY—Rycade Oil Corp's Kountze 1, dr 4195 ft in hard sand. Gulf Prod. Co.'s Craig 4, dr 2600 ft in gumbo and lime; Sanborn 1, dr 250 ft in gumbo. Sheppard Mound Oil Co.'s Hawkins 2, Hawkinsville, sd 2980 ft.

WASHINGTON COUNTY—S. H. Spangler et al's Regeine 1, Sandtown district, dr 1210 ft in hard rock.

WHARTON COUNTY—The Texas Co.'s Taylor 8, Boling, dr 3038 ft in gumbo; Taylor 9, dk. Felder 1, dk. Floyd 1, dr 2405 ft in shale. Vacuum Oil Co.'s Hooper 1, Boling, waiting on cement to set, 4357 ft; Hooper 2, dr 3671 ft in green shale. J. K. Hughes Dev. Co.'s Mullins 1, Boling, dr 3017 ft in sand, oil showing. Houston Gulf Gas Co.'s Woodfin 1, dr 705 ft in gumbo. Gulf Prod. Co.'s Mick 1, Boling, dr 1350 ft in anhydrite. Jas W. Rich et al's Dennis 2, Mackey, sd 1012 ft. Sorrel 1, Mackey, dr 1042 ft in blue shale.

ST. MARTIN'S PARISH—Rycade Oil Corp.'s Atchafalaya 1, dr 640 ft in sand.

ST. MARY'S PARISH—Rio Bravo Oil Co.'s Glenwild 1, no report.

Central West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Crockett County—		
Humphreys Corp. University 1.....	*	4391
Glasscock County—		
Choate-Henshaw & Marland Oil Co. Neal 1	*	3302
Upton County—		
F. P. Zoch & Marland Oil Co. Union 1, sec. 4	*	3211

DRILLING REPORT

BREWSTER COUNTY—Green Valley Oil Co.'s J. P. Wilson 4, dr 720 ft.

COKE COUNTY—Lipan Oil Co.'s E. C. Rawlings 1, dr 2090 ft.

CONCHO COUNTY—R. C. Dutton et al's W. O. Schultz 1, sd 1355 ft. K. Kimberlin et al's Schultz 1, dr 875 ft.

CRANE COUNTY—Cordona Oil & Potash Co.'s Cowden 1, sd 3571 ft. J. S. Cosden et al's W. E. Connell 1, elevation 2802 ft, top salt 950 ft, dr 1840 ft. Cranfill Bros. Oil Co.'s P. J. Lea 1, lcn. Davis-Hoffman et al's University 1, lcn. Gilliam-Conner et al's W. H. Penix 1, elevation 2820 ft, dr 670 ft. Gulf Prod. Co.'s J. T. McIlroy 1, lcn. Magnolia Pet. Co. et al's University 1, elevation 2601 ft, top salt 1145 ft, top lime 2925 ft, pumping 75 bbls 30.7 gravity oil and some water 3040 ft. Marland Oil Co.'s E. S. Hughes 1-A, Sec. 2, top salt 475 ft, dr 1945 ft. Texas Development Co.'s Cowden 1, rig burned, td 3820 ft. Penn-Texas Dev. Co.'s Cowden 1, plugged back from 3358 to 2790 ft for shot. The Texas Co.'s Sanger 1, rig. F. P. Zoch & Marland Oil Co.'s Keith-Hughes 1, Sec. 92, elevation 2594 ft, top salt 728 ft, top lime 2290 ft, pumping 75 bbls oil and little water 2564-70 ft.

CROCKETT COUNTY — Agnew & Lockhart's University 1, lcn. California Co.'s University 2, lcn. J. S. Cosden et al's Noelke 1, sr with hfw, td 2230 ft. Carl Cromwell et al's Powell 2, top salt 1161 ft, dr oil pay with 1600 ft oih at 2668-80 ft; Powell 3, top salt 1160 ft, dr 1420 ft; Powell 4, rig. Crockett Drilling Synd.'s Shannon 2, sd 2375 ft. Cumberland O. & G. Co. et al's Couch 1, sd 540 ft. Gulf Prod. Co.'s Powell 1-A, elevation 2795 ft, top salt 1140 ft, set 8¼ cas 2425 ft; Powell 2-A, top salt 1175 ft, dr 2365 ft; Powell 3-A, dr 915 ft; G. L. Thompson 1, rig. Humble O. & R. Co.'s Sorg 1, sd making oil and water 2680 ft. Humble & Marland's Powell 4, top salt 1128 ft, dr 2395 ft; Powell 5, rig; Powell 6, dr 1045 ft; Powell 7, ur 800 ft; Powell 8, rig. J. K. Hughes et al's Powell 1, top salt 1170 ft, dr 1920 ft; Powell 2, lcn; Powell 1-A, fsh 320 ft. Magnolia Pet. Co.'s J. M. Shannon 1, sr with hfw 2550 ft. Marland Oil Co.'s Todd 1, set 12½ cas 975 ft. Roxana Pet. Corp.'s Powell 1, top salt 1160 ft, dr 1620 ft. Wm. Schaffer et al's University 1, dr 1465 ft. Ben Simon et al's Shannon 1, rig. The Texas Co.'s J. S. Todd 1, elevation 2672 ft, top salt 1028 ft, bailing small quantity 30 gravity oil after shot 40 quarts in sandy-lime 1900-10 ft, td 2102 ft. H. F. Wilcox O. & G. Co.'s University 1, rig. F. P. Zoch & Marland's University 1, rig.

CULBERSON COUNTY — Deep Rock Oil Co.'s T. P. Fee 1, rig. Pure Oil Co.'s Mrs. G. H. Quaid 1, dr 2240 ft.

JEFF DAVIS COUNTY — Herbert Oil Co.'s T. M. Wingo 1, ur cas 2580 ft. Humble O. & R. Co.'s McCutcheon 1, dr 840 ft.

ECTOR COUNTY—J. C. Cooke et al's Henderson 1, lcn. J. S. Cosden et al's Johnson 1, rig; W. E. Connell 1-A, materials; Connell 1-B, materials. Broderick & Calvert's W. F. Cowden 1, lcn. The Exploration Co.'s Kloh et al 1, lcn. Simms Oil Co.'s W. P. Edwards 1, lcn. Skinner et al's J. W. Buchanan 1, lcn.

FISHER COUNTY — McCord (was Scott Braden) et al's Isaac Harris 1, sd repairs 650 ft.

GARZA COUNTY—Deer Rock Oil Co.'s S. M. Swenson 1, fsh tools 1620 ft. Emerland Oil Co.'s Connell 1-A, sd 3200 ft; J. M. Boren 1, fsh bit 2490 ft. Mid-West Exploration Co.'s N. N. Rogers 1, top salt 535 ft, dr 2035 ft.

GLASSCOCK COUNTY — Case-Hoover et al's W. H. Sparkman 1, dr 3020 ft. Mascho-Marland Oil Co.'s Calder 1, fsh cas 1660 ft.

TOM GREEN COUNTY—M. B. Bryant et al's Llano Fee 1, dr 2010 ft. Roxana Pet. Corp.'s L. T. Clark 1, dr 2735 ft. World Oil Co.'s Pulliam 1, rig.

HOWARD COUNTY—Carey & Fogelson's Dora Roberts 1, lcn. Choae-Henshaw & Marland's O'Daniel 1, sd 3103 ft. Magnolia Pet. Co.'s Otis Chalk 1, lcn. Owen-Sloan Oil Corp.'s Otis Chalk 1, Sec. 113, Blk. 29, elevation 2430 ft, flowing 70 bbls by heads daily 1577-86 ft; Chalk 2, lcn. Reeves & Apperman's H. R. Clay 1, machine. Transcontinental Oil Co.'s Dora Roberts 1, ur 8¼ cas 1940 ft.

IRION COUNTY—Oklavania Oil Co.'s Sawyer 1, fsh tools 2390 ft. P. H. Williams et al's Ashe Bros. 1, dr 1455 ft.

JONES COUNTY—Shaw-Rathke et al's Wm. Bristow 1, dr 505 ft.

KENT COUNTY—The Texas Co.'s Barron 1, dr 3010 ft.

LYNN COUNTY—Hart Oil Co.'s C. O. Edwards 1, dr 680 ft.

MITCHELL COUNTY—The California Co.'s W. L. Foster 1, lcn. B. H. Gogdell et al's McKenzie 1, dr 135 ft. Mid-Kansas O. & G. Co.'s Ellwood 1, sd 3203 ft. Magnolia Pet. Co.'s Mary Foster 2, rig; A. P. Watson 1, dr 2430 ft; L. Coleman 1, dr 3345 ft; Abrams 1, dr 2720 ft. Owen-Sloan Oil Corp.'s C. P. Conway 1, dk. Waterbury et al's Ellwood 1, lcn.

PECOS COUNTY — Dixie Oil Co.'s Hersheusen 1, dr 4330 ft. Carl Cromwell & Kimberlin's Scharff-Blackman 1, dk. Lloyd-Miller et al's Bonebrake 1, lcn. Levi Smith et al's Devlin 1, dr 930 ft. Transcontinental Oil Co.'s Perry 1, sd contract depth 3000 ft. Trans-Pecos Oil Co.'s Bennett 1, sd 1100 ft. Quinby et al's Townsite 1, dr 1105 ft.

PRESIDIO COUNTY — Hadlock-Miller et al's Tootle 1, fsh cas 2204 ft.

REAGAN COUNTY—H. D. Camp et al's University 1, co 1050 ft. Marland Oil Co.'s University 1, lcn in Sec. 19, Blk. 58. Marland & J. A. Mascho's Sawyer 1, sd 480 ft. Marland & F. P. Zoch's Talley 1, elevation 2613 ft, top salt 1060 ft, dr 2565 ft. Ben Simon et al's R. A. Walters 1, dr 360 ft. L. V. Tannehill et al's University 1, sd 3250 ft. The Texas Co.'s J. D. Sugg 1, elevation 2621 ft, top salt 868 ft, top lime 2080 ft, dr 2835 ft.

REEVES COUNTY—Bell-Regan et al's T.

IT SEEMS

IMPOSSIBLE

A 2¾-Inch Valve in a 1¾-Inch Pump

BUT IT IS

POSSIBLE

Sargent Screw Seats

The Screw Seats used in the Texas Type Valve may be obtained in either Ball or Plumb Bob type and in the regular hard steel or Seco and RM non-magnetic and non-corrosive steel alloys.

The Seat used with a 1¾-inch pump has an opening equivalent to the regular 2¾-inch ring seat and the seat used with a 2¾-inch pump has an opening equivalent to the regular 4-inch ring seat.

The 2¾ and 3¾-inch seats have the same relative increase in fluid capacity.

Sargent Two-Cup Drop Valve may be dropped into place above Texas Valve when latter becomes defective.

Number 1—Top Bushing

Attaches to lower pump collar with a finished nipple. Contains ball bumper and is counter bored on taper to allow proper fluid passage around ball or plumb bob.

Number 2—Screw Seat

Seat screws to a shoulder in top bushing and lower end is threaded to take standard size pipe for gas anchor.

Number 3—Lower Bushing

Lower bushing screws on lower part of screw seat and jams against top bushing and acts as lock nut. Lower end is threaded to take standard size tubing.

No other valve offers such tremendous fluid capacity and so many beneficial features.

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WRITE FOR OUR NEW 1926 CATALOG

Say you saw it in The OIL WEEKLY

P. Fee 1, lcn. Grisham-Hunter Corp.'s State Fee 1, lcn. Humble O. & R. Co.'s T. P. Fee 1, dr 1775 ft. Schooler-Slack et al's T. P. Fee 1, sd 540 ft. World Oil Co.'s T. P. Fee 1, dr hfw 3435 ft.

SCHLEICHER COUNTY—Beavers-Leath et al's Whitten 1, materials.

SCURRY COUNTY—E. E. Fogelson's Bruce 1, sd 1905 ft. Northwest Co.'s H. P. Welborn 1-A, sd 1900 ft.

STONEWALL COUNTY—Arkansas Fuel Oil Co.'s Craft 1, bailing water, dr 3466 ft. Swenson Oil Corp.'s Ward 1, sd 3605 ft.

STERLING COUNTY—The California Co.'s Devis 1, rig. Co-Operative Dev. Co.'s E. W. Douthitt 1-A, sd 2675 ft. Chicago-Texas O. & G. Co.'s Durham 1, sd 3502 ft. Deep Rock Oil Co.'s L. T. Clark 1, ur 10-inch cas 1985 ft. The Exploration Co.'s C. A. Broome 1, lcn. H. D. Rummel et al's L. T. Clark 2, fsh 1160 ft. C. J. Wrightsman et al's Collins 1, dr 2560 ft.

SUTTON COUNTY—Chesapeake Oil Co.'s Clarkson-Allison 1, dr lime 2395 ft.

TAYLOR COUNTY—Sanger O. & R. Co.'s Norwood 1, dr 2105 ft.

TERRELL COUNTY—E. T. Williams et al's Sowden 1, sd with crooked hole 110 ft.

UPTON COUNTY—Big Mesa Oil Co.'s University 1, sd 3293 ft. Choate-Henshaw & Marland's Noelke 1, Sec. 20, dr 2535 ft. Dixie Oil Co.'s E. S. Hughes 1, elevation 2501 ft, top salt 430 ft, showed non-inflammable gas 1085 ft, dr 1520 ft; Burleson 1, preparing to pump with 350 ft oih after shot 35 quarts 2185-91 ft, td 2230 ft; Burleson 3, rig. W. W. Donnelly & L. E. Hults' H. M. Halff 1, sd 3250 ft. Eastland Oil Co. et al's E. S. Hughes 1, Sec. 12, rig. Gulf Prod. Co.'s Mrs. M. L. Baker 1, rig. Marland Oil Co.'s Sanger 2, co after shot 200 quarts 2182-2220 ft, td 2225 ft; Burleson 1, lcn; Burleson 2, elevation 2615 ft, top salt 555 ft, dr with 800 ft oih 2180-2215 ft; Burleson 3, flowing 65 bbls oil, dr 2111-37 ft; Benton 1, Sec. 1, elevation 2495 ft, top salt 540 ft; top lime 2110 ft, dr 2275 ft. Plateau Oil Co. et al's Union Fee 1, Sec. 34, dr 2985 ft. Republic & Marland's Baker 2, dr 560 ft. Sartain Bros. & Davis' Mrs. G. V. Bull 1, lcn. Sun Oil Co.'s Burleson 1, lcn. The Texas Co.'s Union Fee 1, fsh tools 2390 ft. Tidal Oil Co.'s Union Fee 1, Sec. 2, elevation 2543 ft, top salt 546 ft, dr 1130 ft.

WARD COUNTY—Chesapeake Oil Co.'s Edgar J. Marston 1, elevation 2535 ft, top salt 825 ft, dr 3200 ft. Gulf Prod. Co.'s Hutchings 1, dr gray lime 4490 ft.

WINKLER COUNTY—R. A. Westbrook & Co.'s T. G. Hendrick 1, ur 12½ inch cas 865 ft. Lou D. Ladd et al's T. W. Amburgey 1, lcn.

San Antonio Wildcats

BROOKS COUNTY—Bendeum et al's Wormerser Bros. 1, dr.

CALDWELL COUNTY—Van Keuren Oil Co.'s Ridout 1, dr. United North & South Oil Co.'s Kelly 1, dr; Tiller, dr. Gulf Production Co.'s J. M. Cardwell 1, dr. Marland Oil Co.'s Alexander 1, dr. Reiter-Foster's Alexander 1, dr, 1855 ft in Austin chalk.

DUVAL COUNTY—Mauer & Duggan's Hoffman 1, dr. Associated Oil Co.'s Sutherland 1, dr. Barkley, Meadows & Morgan's No. 1, blk 4, sur 10, bailing. Humble Oil Co.'s Walsh 5, coring; Schalbert 4, dr. Grayburg Oil Co.'s Halff 1, dr. J. K. Hughes Dev. Co.'s Peters 1, dr. Seagraves & Moody's Mesquite 1, dr; Walsh 1, set liner; Benavides 1, dr; Benavides 2, dr; Benavides 3, dr; Benavides 4, dr. Cintex Pet. Co.'s Benavides 3, plugged; Benavides 5, set cas at 1774 ft. Houston Oil Co.'s Benavides 3, plugged; Benavides 4, dr. Gibson Oil Corp.'s sur 353, dr at 1200 ft.

DEWITT COUNTY—Yoro Dev. Co.'s Holzaphel 2, dr.

GUADALUPE COUNTY—Wroten-Hundley's Meulder 1, rig up. Dunning & Armstrong's Dale 1, dr. Marland Oil Co.'s No. 1, near St. Hedwig, dk. Howell et al's Louis Willman, dr. Smith-Payne-Bond's Duran 1, dr. Humble Oil & Ref. Co.'s Wholfahrt 1, dr; Julan Strapper 1, dk. Payne-Bond's Rosebrock 1 dr.

KARNES COUNTY—Earl B. Reynolds' Butler 1, bailing.

MEDINA COUNTY—Medina Oil Co.'s Taylor 4, dr below 300 ft; Odem 1, spudded in; Odem 2, dk; Mott 1, dk. Golden West Oil Co.'s Batot 1, dr. Walsh et al's Saathoff 1, dr. Reager et al's sur 117, dr 850 ft. Grayburg Oil Co.'s Ward 1, dr 2200 ft, little gas shown. Witherspoon Oil Co.'s Nixon 1, dr. Patterson-Patterson's Longfield 1, dr. Gibson Oil Corp.'s Viola Wilson 4, set cas. Rand et al's No. 1, dr. Alamo Drilling & Leasing Co.'s Groff 1, dr; Ward 1, dr. Ina Oil Co.'s Wilson 2, set cas; No. 1, survey 746, rig up. Knox, Barlow et al's No. 1, survey 81, rigging up. Estha & Tarver's Viola Wilson 2, dr. Jacobs et al's Odem 1, dk; Hagelin 1, rig up. Plateau Oil Co.'s V. H. Johnson 1, lcn; Bendel 1, lcn. Buchanan et al's Odem 1, set cas. Arnett Oil Co.'s Nixon 3, dr. Dr. J. M. Cavender et al's Mott 1, fsh. California-Medina's Rothe 1, dr. Henderson & Holden's Adams 1, set cas; Adams 2, dr.

WILSON COUNTY—W. L. Brashear's Standish 1, dr below 2760 ft.

Rocky Mountain Wildcats

WYOMING—Union Oil Co.'s Lake Creek 1A, 28-43-91, co 30 ft; Lake Creek 4B, 34-43-91, sr 1101 ft; Fremont County 1, 10-28-92, sd 2305 ft; Fremont County 1C, 15-5-1, changing derricks at 1580 ft. Producers & Refiners Corp.'s St. Mary's 1, 9-21-84, dr 777 ft; Simpson Ridge 14, 20-21-80, dr 660 ft; Sugar Creek 1, 36-22-86, 6-inch cas set at 775 ft. Ohio Oil Co.'s Byron 2, 33-56-98, sd 1860 ft; Hidden Dome 3, 31-48-90, fsh 2527 ft. Continental Oil Co.'s Wallace Creek 1, 15-34-87, trying to land 6-inch cas at 4002 ft. Prairie O. & G. Co.'s Gooseberry 1H, 32-47-100, fsh 3299 ft; Belle Springs 2, 6-33-89, sd 2561 ft. New York Oil Co.'s Boone Dome 2, 10-35-85, sd 5192 ft. Kinney-Coastal Oil Co.'s Mease Dome 3, 27-6-3, changing to Rotary at 2001 ft. Producers & Ref. Corp.'s Crook's Gap 1, 13-28-93, sd 2590 ft; Crook's Gap 2S, SE¼ 13-28-93, sd 3801 ft; Crook's Gap 1S, SW¼ 18-28-93, sd 3095 ft. Midwest Refining Co.'s Dry Piney 36X, SW¼ 1-28-114, sd at 4000 ft. California Co.'s Garland 1, 10-56-97, dr 4325 ft. Reese Oil Co.'s La Barge 1, NW¼ 27-27-113, dr 500 ft. M. Bennett's La Barge 1X, NW¼ 26-27-113, dr 700 ft. Elk Butte Oil Co.'s Shoshoni structure 1, 20-45-101, ur 2290 ft.

COLORADO—H. H. Temple's Arapahoe County 1, 11-4-58, dr 740 ft. Chesapeake Oil Co.'s Prowers County 1J, 30-27-45, dr 4000 ft. Continental Oil Co.'s Jackson County 1, co 2772 ft. Associated Oil Co.'s Tinmath 1W, 4-6-68, fsh 4798 ft. Union Oil Co.'s No. 1M, 31-5-98, fsh 3590 ft. Mutual Oil & Dev. Co.'s Fremont County 1, 34-17-70, sr 3215 ft. Midwest Ref. Co.'s Rio Blanco County 1, will resume operations. Gypsy Oil Co.'s Mesa County 1M, 9-9-101, sd Mesa County 1, 5-8-102, will drill deeper. Erdman Producing Co.'s La Plata County 1, 23-33-12, cas 3080 ft. Rollerstone Co.'s Arapahoe County 1D, 1-51-65, will resume dr 1478 ft. Texas Production Co.'s Rio Blanca County 1E, 30-2-102, fsh 3035 ft. Red Creek Oil Co.'s El Paso County 1JJ, 19-17-67, dr 2375 ft. Christy Oil Co.'s El Paso County 1, 17-17-64, 5-3/16-inch cas 3002 ft. Union Oil Co.'s Elk Springs 2, 31-5-98, sr 2855 ft.

UTAH—Embar Oil Co.'s Moab 1, 34-25-21, dr 2860 ft. Western States Dev. Co.'s Crescent Structure 1, 27-21-19, dr 1120 ft. Marland Oil Co.'s Green River 1C, 35-21-16, fsh 2600 ft. Crescent Eagle Oil Co.'s Crescent Structure 1, 4-22-19, 4-inch cas run at 3797 ft. Utah Oil & Dev. Co.'s Moab 1, NW¼ 8-28-22, building rig. Producers & Refiner's Corp.'s Clay Basin 1, NW¼ 22-3-24, dr 4810 ft.

NEW MEXICO—Hub Oil Co.'s Correo 1, NE¼ 13-6-2, dr 1225 ft. Red Feather Oil Co.'s Cow Springs 2, 30-4-9, dr 1301 ft. Arkansas Gas & Fuel Co.'s Manning Dome 1, 14-15-17, fsh 3424 ft. W. R. Wooley's No. 1, 33-173-30, sd 1000 ft. L. D. Welch's Continental Divide 1, 1-17-9, ur 1115 ft. Congress Oil Co.'s No. 1, 34-29-11, Bloomfield Mesa, 34-29-11, fsh 920 ft. John F. White's Spaulding Dome 1, 11-6-25, sd 250 ft.

MONTANA—Prairie Oil & Gas Co.'s Mifflin Dome 1, dr 3225 ft. Elkhorn Oil & Gas Co.'s No. 1, 28-22-3, fsh 1595 ft. Stellar Oil & Gas Co.'s Porcupine Dome 8, 20-10-39, building rig. West Va. Oil Co.'s Great Falls 1S, 28-20-4, cas at 250 ft. Springdale Oil Co.'s Springdale 1S, dr 3215 ft. Bell Oil Co.'s Sweet Grass 1F, 5-35-3, dr 606 ft.

Northern California Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Antelope Plains—		
Union Oil Co.'s Miller & Lux.....	•	2410

DRILLING REPORT

ANTELOPE PLAINS—Marland Oil Co.'s Lazard 1, dr 2750 ft.

DELANO—Chanslor-Canfield Oil Co.'s No. 1, cleaning out, 3874 ft.

DEVIL'S DEN—Devil's Den Prod. Co.'s No. 3, trying to straighten hole at 200 ft. Marathon Oil Co.'s No. 1, r 4320 ft. Robbins Oil Co.'s No. 1, dr 1525 ft.

GOULD HILLS—Mendocino-Midway's No. 1, cmt. 1300 ft. Myrtle F. Oil Co.'s No. 1, on pump, 881 ft.

ROSEDALE—A. G. Schwartz's No. 1, dr 980 ft.

KETTLEMAN HILLS—Standard Oil Co.'s No. 1, preparing to abn 5541 ft.

SHALE HILLS—Big 8 Oil Co.'s No. 2, sd 945 ft. Browngold Oil Co.'s No. 1, sd 3945 ft. Shale Hills Oil Co.'s No. 1, sd 1400 ft.

TEMBLOR HILLS—Belridge Oil Co.'s No. 1, dr 3091 ft. Hovey Hills Oil Co.'s No. 1, sd 2410 ft. Fortuna Oil Co.'s No. 1, re-dr 1400 ft.

WASCO—Main Oil Co.'s No. 1, re-dr 5304 ft; No. 2, sd 5276 ft.

EASTERN KERN COUNTY—Crusaders Oil Co.'s No. 1, dr 1990 ft; No. 1, dr 320 ft.

ELK HILLS—Interstate Oil Corp.'s No. 1, sd 5156 ft. Naval Reserve Oil Co.'s No. 1, sd 3676 ft. North Elk Hills Oil Co.'s No. 1, sd 4002 ft.

MT. POSO CREEK—Shell Co.'s Vedder 1, sd, cmt 1769 ft. Geo. F. Getty's Arnold 1, dr 2105 ft.

McKITTRICK—Barnsdall Oil Co.'s No. 1, sd 4459 ft. Goldman & Sons' No. 1, sd 3050 ft. Hall-Baker's No. 1, sd 1024 ft. Lacy-Esper's No. 1, cmt 3115 ft. Oleo Fluo Oil Co.'s No. 3, dr 650 ft. Ridge Oil Co.'s No. 1, dr out cement 2100 ft.

SUNSET—Bell-Wrightsman's No. 1, waiting on permit, 5535 ft. Fresno-Sunmaid's No. 1, sd 4005 ft. King Gillette's No. 1, rigged up. Milham Exploration Co.'s No. 1, dr 968 ft.

CLOVIS—Fresno-Madera's No. 1, dr 3720 ft.

HURON DISTRICT—Associated Oil Co.'s No. 1, fsh 1770 ft.

KERMAN—Associated Oil Co.'s No. 1, sd 5735 ft.

RAISIN COUNTY—Fresno-United's No. 3, setting boilers.

KETTLEMAN HILLS—Associated Oil Co.'s No. 1, sd 2043 ft. Bolsa Chica Oil Co.'s No. 1, sd 1798 ft. Marland Oil Co.'s No. 1, re-dr 5449 ft. So. Coalinga Oil Co.'s No. 1, dr 510 ft.

VENTURA COUNTY—Alexander Drilling Co.'s No. 1, sd 1716 ft. Apex Oil Co.'s No. 1, sd 510 ft. Associated Oil Co.'s McGonigal, grading for rig site. R. F. Bishop's No. 1, repairing road, dr to 150 ft. Chanslor-Canfield's Hobson 1, fsh 3940 ft. Henry R. Dabney's Karr 1, repairing roads, dr to 1300 ft. Ford-Chalmer's No. 1, dr 2140 ft. Gillette-Howard's Elkins 2, ready to spud. Hopper Canyon Oil Co.'s No. 1, repairing roads, dr to 4325 ft. E. J. Miley's Casitas 2, rigging up. Milham Exploration Co.'s Sexton 1, dr 3970 ft. Montecito Oil Producer's No. 1, fsh 3200 ft. Ring Pet. Corp.'s No. 1, sd 3760 ft. Shell Co.'s Berlywood 1, dr 3260 ft. Sentinel Oil Co.'s Squaw Flats 1, repairing roads, dr to 240 ft. Sespe Oil Co.'s Smith 1, repairing 15¾-inch string 3020 ft.

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YOU KNOW Columbus got across the ocean with his little sailing vessel, but how much nicer it is this 20th century to book a passage on a fast steamer.

On Dreadnaught Rigs you'll find the crew making hole. Down she goes!—rapidly, easily, economically. From the make and break rotary to the patent grease pin travelling block, every item of equipment is safer, better, faster.

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West of the Mississippi—Stores Everywhere
East of the Mississippi—The Frick & Lindsay Co.

Say you saw it in The OIL WEEKLY

SANTA BARBARA COUNTY—Geo. F. Becker's Summerland 1, dr 1935 ft. Channell Oil & Dev. Co.'s No. 1, sd 4820 ft. Nugent Oil Co.'s Catlin 1, sd 4549 ft.

SAN LUIS OBISPO COUNTY — Arroyo Grande Pet. Co.'s 1, cleaning out 3705 ft. Barneyberg Oil Corp.'s No. 1, dr 4220 ft. Carrissa Oil Co.'s No. 1, dr 2035 ft. Carlisle Oil Co.'s No. 1, sd 2560 ft. Panorama Oil Co.'s No. 1, re-dr 1190 ft. Portland Pet. Co.'s No. 1, fsh 2700 ft.

MONTEREY COUNTY—Henigan-Schwenigan's No. 1, sd cmt. 2210 ft. Harriman Jones Oil Co.'s No. 1, fsh 4200 ft. Pyramid Oil Producer's No. 1, testing 1853 ft.

TULARE COUNTY—R. H. Baker's No. 1, dr 2430 ft. Big 4 Oil Synd.'s No. 1, dr 4024 ft.

YOLO COUNTY—San Martinez Oil Co.'s Yolo Co., sd.

ALAMEDA COUNTY—Conniff's No. 1, sd 325 ft.

COLOUSA COUNTY—S. H. Keoughan's No. 1, cleaning out, 1700 ft.

SANTA CLARA COUNTY—Lone Hill Oil Oil Co.'s No. 1, dr 1345 ft.

SUTTER COUNTY—Sutter Co. Oil Co.'s No. 1, dr 2900 ft.

Southern California Wildcats

ALAMITOS HEIGHTS—Umpire Pet. Co.'s Judson 1, temp sd.

ARTESIA—A. L. Benson's No. 1, sd 5238 ft.

BELLFLOWER—Calpetro Producers' No. 1 sd 4420 ft. Calpetro Producers' No. 2, sd 4774 ft.

BREA CANYON—Shell Co.'s Menchago 1, dr 2370 ft.

BURBANK — Jeffries-Overton's No. 1, dr 841 ft.

BIXBY HILLS—National Security Co.'s 1, sd 5151 ft. Orange Co. Pet. Co.'s No. 1, sd 2820 ft.

CHATSWORTH — Superior Oil Co.'s Joughin 1, rep road, 4171 ft.

CLAREMONT—Chas. H. Blair's No. 1, dr 975 ft.

EAGLE ROCK—Calwin Oil Co.'s No. 1, dr 5808 ft.

EL SEGUNDO—Ryder Synd.'s No. 1, sd 975 ft.

HYDE PARK—Marland Oil Co.'s Connolly 1, dr 4800 ft.

IRVINE—Calny Oil Co.'s Irvine 1, sd 4247 ft.

KEYSTONE—W. E. Garner's Community 1, sd 685 ft.

LANCASTER—Rudd-Asmussen's No. 1, dr 1041 ft.

LA MIRADA—Union Oil Co.'s McNally 1, dr 5000 ft.

MANHATTAN—Geo. W. Johnson's Martin 1, dr 1100 ft. Julian Pet. Corp's Hellman 1, dr 741 ft. Manhattan-Pac.'s Bardeen 1, dr 4409 ft.

MAYWOOD—Magnolia Pet. Synd.'s Tweedy 1, sd 4452 ft.

NEWHALL-SAUGUS — Amalgamated Oil Synd.'s Nash 2, standing idle 1060 ft. W. G. McAdoo's No. 1, sd 1270 ft. Milham Exploration Co.'s Conroy, dr 4000 ft. W. W. Stabler's Castaic, dr 1550 ft. Temple-Lefevre's Castaic 1, dr 2025 ft. Union Oil Co.'s Saugus 1, dr 2904 ft.

PACOIMA—W. O. Brubaker's Fernando 1, drilling to 2575 ft, drill pipe stuck in hole.

PLAYA DEL REY—Milham Exploration Co.'s No. 2, dr 4545 ft.

SAN JOSE HILLS—Bardeen Oil Co.'s No. 1, sd 4100 ft; No. 2, testing at 1904 ft. D. & B. Oil Co.'s Amar 1, dr to 1570 ft.

SAN JUAN CAPISTRANO—A. & P. & K. Synd.'s No. 1, sd cmt 2560 ft.

SAN FERNANDO—Standard Oil Co.'s University 1, rigging rotary.

SAN PEDRO—San Pedro-Pt. Fermin Oil Co.'s No. 1, fsh 3723 ft.

TELEGRAPH CANYON—Quadra Pet. Co.'s No. 1, dr 2250 ft.

VAN NUYS—Van Nuys Community Oil Co.'s No. 1, sdtr at 2734 ft.

RIVERSIDE COUNTY —Beaumont-Midway Synd.'s No. 1, fsh 5355 ft. Beaumont-Riverside Oil Synd.'s No. 1, sd 1266 ft. Corona Oil & Gas Test's No. 1, temp. sd 350 ft. Spindle top Oil Synd's Salton 1, dr 2060 ft. Burgess-Goodale's Riggins 1, dr 2510 ft. Como Oil Co.'s Cajon 1, sd cmt 1200 ft. Dome of Chino Valley's Ranger 1, sd 1945 ft. Del Rosa Oil Co.'s No. 1, sd 2460 ft. Hesperia Oil & Gas Co.'s No. 2, fsh. Mahala Oil & Gas Co.'s No. 2, dr 4766 ft. Zenith Oil Co.'s No. 3, dr 250 ft.

Louisiana Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Caddo Parish—		
Fortuna Oil Co.'s Levee Board 2, 8-20-15, ...	* 4023	

DRILLING REPORT

BOSSIER PARISH—Arkansas Fuel Oil Co.'s Murray 1, 14-23-14, dr 2980 ft. Benton Synd.'s Bulkley 1, 9-20-13, sd 1182 ft. Collins & Woodley's Kilburn 1, 18-19-13, testing 2571 ft; L. & A. Oil Co. 1, 14-23-12, set 10-inch 389 ft. Herndon et al's Burkhalter 1, 17-18-11, dr 130 ft. Square Deal Oil Co.'s Hale 1, 17-18-11, set 8-inch 1227 ft.

CADDO PARISH—Arkansas Natural Gas Co.'s Lane 1, 13-21-15, dr 3525 ft. Dixie Oil Co.'s Jolley 1, 27-22-15, dr 3975 ft; Robertshaw 71, 14-21-15, dr 3290 ft. Fortuna Oil Co.'s Bradford 1, 23-12-15, set 8¼-inch 2479 ft; Spell 1, 20-21-15, dr 2900 ft. Gulf Ref. Co.'s Byrd 1, 2-19-14, set 6-inch 965 ft; Lane 17, 13-21-15, dr deeper 3680 ft; Muslow 1, 30-21-15, dr 2635 ft; Tyson 1, 14-21-15, dr 2985 ft. Ohio Oil Co.'s Ardis 1, 1-21-15, dr 4135 ft; E. K. Smith 18, 12-21-15, twisted off 3870 ft. D. C. Richardson's Youree-Randolph 3, 13-20-15, set 6-inch 2246 ft. The Texas Co.'s C. M. L. 42, 23-21-15, dr 3435 ft; C. M. L. 43, 23-21-15, set 12½-inch 300 ft; Federal-Jeems Bayou B-1, 15-20-15, sd 4405 ft.

CALDWELL PARISH—Chal Daniels et al's Liveley 1, 6-12-4e, set 10-inch 205 ft. Grant et al's Cruse 1, 6-11-4e, set 10-inch 60 ft. Standard Drilling Co.'s Cruse 1, 30-11-4e, dk.

CLAIBORNE PARISH—Gilliland Oil Co.'s Taylor B-10, 14-23-8, dr 1200 ft. Triangle Drlg. Co.'s Hollifield 1, 32-23-5, dr 100 ft; Keen 1, 7-19-5, dr 4055 ft.

DE SOTO PARISH—Carnahan & Kyle's Hollingsworth 1, 24-12-11, set 10-inch 147 ft. Dixie Oil Co.'s Jenkins 1, 9-12-11, dr 3625 ft. ft. J. P. Evan's Sutherlin 1, 20-12-14, lcn. Dresser et al's Williamson 1, 29-15-14, dr 1250 Magnolia Pet. Co.'s Bond 1, 27-12-11, set 4½-inch 2720 ft. A. H. Tarver's Mathews 1, 29-12-11, dk. Ulrey et al's Heard 1, 18-12-12, set 10-inch 133 ft. J. C. Walton's Harp 1, 36-12-11, lcn; Chaffraix 1, 25-12-11, dk.

GRANT PARISH—Dowling & McCurry's Holmes 1, 20-9-1e, sw 1616 ft. Finn et al's Ball & Cody 1, 13-8-1w, dr 150 ft. Holmes et al's Swope 1, 18-19-2e, sw, show of oil, 1623 ft. Hurdley et al's Ball 1, 32-7-1w, set 10-inch 75 ft.

LINCOLN PARISH—Buckley & Palmer's Davis 1, 12-20-3w, sd 1900 ft. The Texas Co.'s Tremont Lumber Co. 1, 27-18-1w, dr 2650 ft.

MOREHOUSE PARISH—Boisseau et al's Sullivan 1, 11-21-7e, fsh 2545 ft.

NATCHITOCHES PARISH—J. F. Palmer's Edenborne 1, 4-11-6, rig.

RAPIDES PARISH—Hincy & Mack's Barrow 1, 29-5-2e, sd 1250 ft. Wheelen et al's Lanier 1, 3-4-3e, sd 1300 ft.

SABINE PARISH—Emlet et al's Bowman-Hicks 5, 8-7-12, dr 3295 ft; Bowman-Hicks 7, 11-7-14, dr 65 ft; Sabine Lumber Co. 1, 8-7-13, dk pattern.

UNION PARISH—Arkansas Fuel Oil Co.'s Reeves 1, 14-20-1e, dr 2715 ft. Clark Creek Oil Co.'s Frost-Johnson 1, 18-23-1e, dr 1200 ft.

WEBSTER PARISH—Arkansas Fuel Oil Co.'s Miller 1, 30-23-9, dr 3075 ft. Doern et al's Bolinger 1, 9-22-11, rig. Humble O. & R. Co.'s Cox 1, 22-21-10, milling 4214 ft. Magnolia Pet. Co.'s Bible 1, 8-20-9, milling 4281 ft; Sexton 1, 32-23-9, dk. Ohio Oil Co.'s Cox 1, 23-21-10, dr 4850 ft. Smitherman & McDonald's Oakley 1, 29-23-11, set 6-inch 3020 ft.

WINN PARISH—Cedar Creek Pet. Co.'s Sullivan 1, 6-10-2w, dr 1345 ft. Cherokee Pet. Co.'s Louisiana-Central Lumber 1, 12-11-2e, sd 1457 ft. Wilson et al's Louisiana-Central 1, 24-13-1e, dr 300 ft. J. R. Hale's Eagle 1, 6-10-2w, sd 950 ft.

Arkansas Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
La Fayette County—		
Arkansas Fuel Oil Co.'s Red River Lumber 3, 7-19-24, ...	* 2831	

DRILLING REPORT

ASHLEY COUNTY—Pine Prairie Oil Co.'s Pine Prairie 2, 1-17-6, dk. Rhodes et al's Bledsoe 1, 20-15-7, sd 2554 ft.

CALHOUN COUNTY—Magnolia Pet. Co.'s Calion 1, 29-15-14, dr 4320 ft. Southern Crude Oil Purch. Co.'s Calion 1, 1-16-14, set 12½-inch 420 ft.

CLARK COUNTY—Heath et al's Arnold 1, 12-9-20, sd 600 ft. Wheelen Oil Co.'s Brown 1, 35-10-20, dr 2225 ft.

CLEVELAND COUNTY—Dedman et al's Moore 1, 28-9-10, sd 1757 ft.

COLUMBIA COUNTY — H. W. Aarnes' Brown 2, 13-15-20, testing 3002 ft. Gordon-Folwell-Dickson Synd.'s Jones 1, 36-15-20, dk. Kent & Fullenwider's Wingfield-Moody 1, 18-19-19, dr 160 ft. Ky-Ark Pet. Co.'s Doss 1, 29-19-20, sd 2079 ft. Scott Phillips' Davis 1, 6-18-20, dk pattern. Pluto Oil Co.'s Robinson 2, 23-18-23, sd 1000 ft.

DALLAS COUNTY—McNeil et al's Owens 1, 29-10-16, sd 2100 ft.

DREW COUNTY—McClintock et al's Ogle 1, 35-13-5, sd 1842 ft.

HEMPSTEAD COUNTY—Burton et al's Garland 1, 23-10-25, sd 1865 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-29, sd 2932 ft.

MILLER COUNTY—Lenze et al's Dale 1, 25-15-26, dr 1350 ft.

NEVADA COUNTY—Greeson et al's Tidwell 1, 22-13-21, sd 1200 ft.

OUACHITA COUNTY — Buffalo Oil Co.'s Davis 2, 22-15-19, wosr 1556 ft; Morgan 3, 22-15-19, bridged over, 1546 ft; Morgan 5, 22-15-19, dk. El Dorado Union Oil Co.'s Hall 1, 3-15-19, dr 1120 ft. Gossett et al's Cosden 1, 21-15-19, wosr 1470 ft; Thompson 1, 22-15-19, dr 1480 ft. Harrell et al's Moline Timber 2, 32-11-17, dk. Magnolia Pet. Co.'s Watson 1, 31-15-19, dr 1750 ft. Hunter et al's Dalpen 1, 21-15-19, lcn. Reynolds et al's Davis 1, 22-15-19, plugging back to 1512 ft; Sawyer 1, 22-15-19, rig. Van Diver et al's Yarbrough 1, 22-14-17, sd 1600 ft.

UNION COUNTY—Bondurant et al's Gardner 1, 8-18-12, sd 1820 ft. Wingfield et al's Cruse 1, 27-17-16, dr 2926 ft.

Oklahoma Wildcats

ATOKA COUNTY—Hansen et al's Dabney 1, C. SE NE 17-4-11, sd 3845 ft.

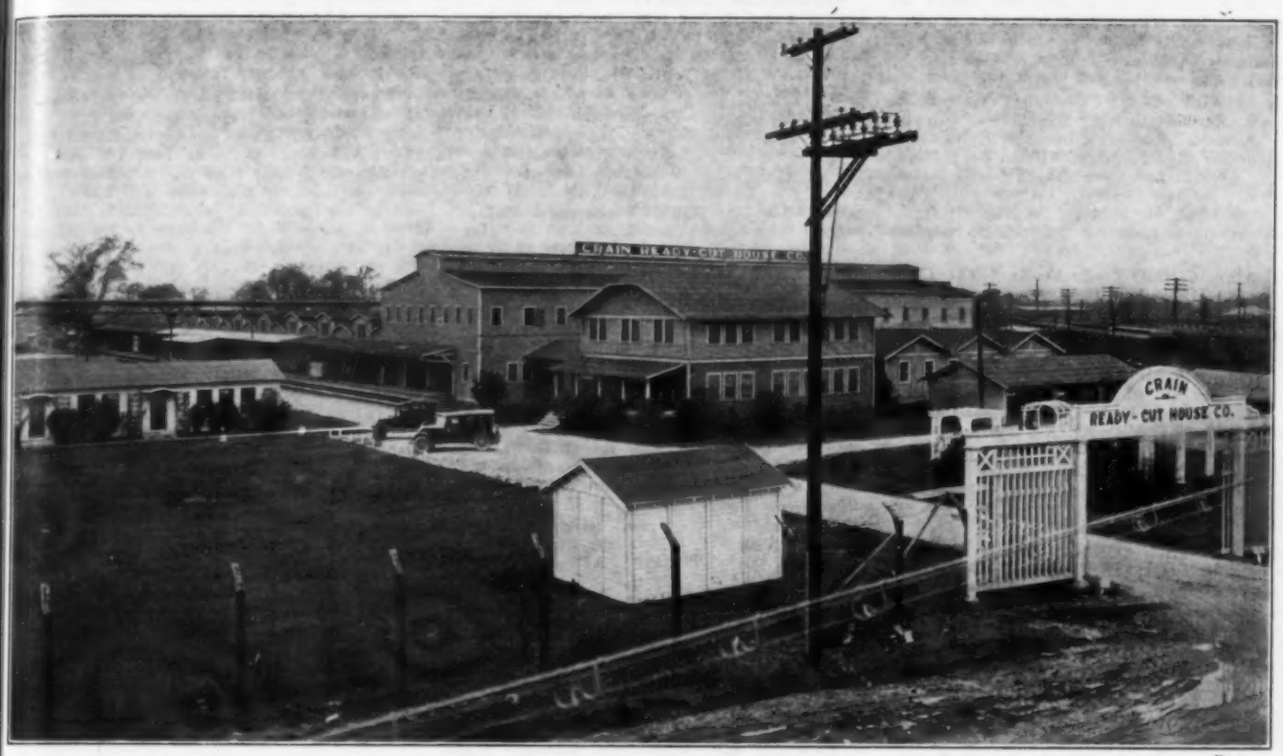
BECKHAM COUNTY—W. R. Duke's McGee 1, NWc SW SE 25-8-22, set 8-inch 950 ft. Kadane et al's Van Vester 1, SE NE NE 25-8-22, rig and tools.

BLAINE COUNTY—Okama Oil Co.'s Eklemeir 1, SWc 21-15-10, sd 2610 ft.

CADDO COUNTY—Continental Diamond's Funk 1, SE SE 1-5-9, building rig.

CANADIAN COUNTY—Thos. Revelle's Dawson 1, NEc SE NW 34-13-9, ur 5-inch at 3680 ft. O. D. Jones' Sanders 1, C NE NE NE 29-11-7, sd 2150 ft.

COMANCHE COUNTY—Daisy Belle Oil Co.'s Warehime 1, C SW SW SW 25-4-9, tools away. Mid-Kansas O. & G. Co.'s Hendricks



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Say you saw it in The OIL WEEKLY

1, C S L SE 33-3-10, sd 1812 ft. Becker & Reed's Hind 1, NEc NW 30-4-10, fsh 1910 ft. J. R. Abernathy's No. 1, NEc NW 24-5-11, lcn. Mid-Kansas O. & G. Co.'s Cox 1, NEc SE NE 30-1-13, cementing 8¼-inch cas at 1241 ft.

GARFIELD COUNTY—Haley, Garber & Pulse's Chevelier 1, NWc SW 6-23-4, dr 1940 ft. Shaffer & Amerada's Brunken 1, NEc 32-24-4, ur for 10-inch, 2180 ft. Bu-Vi-Bar's Johnson 1, SWc 31-23-4, cementing 8¼-inch cas at 3590 ft. Sinclair O. & G. Co.'s Fee 1, SWc SW NE 2-20-5, dr 3528 ft. Wilcox O. & G. Co.'s Salondek 1, C SE SE SE 22-24-6, dr 2250 ft.

GRADY COUNTY—Becker-Reed Oil Co.'s Brown 1, C NW NE 29-6-7, cementing 10-inch at 2046 ft.

GRANT COUNTY—Dedman, Flannagan & Hennage's Sherrer 1, NEc SW 16-26-3, sd 515 ft. Lambert & Mink's Tabor 1, C SE NE SE 23-26-3, spud and sd. Gypsy Oil Co.'s Meugge 1, SEc NW 33-26-3, dr 3750 ft. Marland Oil Co.'s Webb 1, C NW NE NE 2-27-3, dr 4217 ft.

HUGHES COUNTY—Parmenter et al's Stewart 1, C SE SW SW 14-7-9, rig. Henry Greis & Kerr's Pearson 1, C SE NE NE 30-5-4, cd 3500 ft, sd.

JEFFERSON COUNTY—Oasis Drilling Co.'s Major 1, C SE SW 34-5-6, spud and sd.

KAY COUNTY—Tonkawa Dev. Co.'s McDaniels 1, C SE SE SE 15-25-1, dr 3040 ft. Souligny Bros.' School land 1, NEc NW 16-26-3, dr 3810 ft. Davis Drilling Co.'s Street 1 C NE NE NE 31-28-3, fsh 3710 ft.

LINCOLN COUNTY—Douglas Oil Corp.'s Ewing 1, NWc 7-13-3, fsh cas td 4515 ft. Flynn, Morgan & Young's Rittenhouse 1, NWc SE 26-16-5, dr 1665 ft.

LOGAN COUNTY—Blackford O. & G. Co.'s Lair 1, C S L N½ SE 28-16-1, sd 1675 ft. Haley & Pioneers' Quair 1, SWc SE 33-18-3, dr 1900 ft. Franklin Oil Assn.'s Moore 1, SWc SE 28-18-4, 6-inch 3905 ft. Bryan & Emery's No. 1, NWc SE 33-19-4, td 315 ft, sd.

LOVE COUNTY—Pender et al's Gray 1, C SE SE 19-9-1, dr 2715 ft.

MAJOR COUNTY—Franz & Slick's Gray 1, C NW 36-21-11, sd 1000 ft. Texas Prod. Oil Co.'s Cheyenne Basin 1, SWc 6-22-14, sd 200 ft.

MARSHALL COUNTY—United "8" Oil Co.'s Marshall 1, SW SW 30-5-6, sd 585 ft.

NOBLE COUNTY—Miller's 101 Ranch 1, NEc 1-24-1, dr 1505 ft.

POTTAWATOMIE COUNTY—Davis Detrick's McCathy 1, SEc NW 10-6-2, dr 4070 ft. Shaffer et al's Ives 1, NWc SE SE 12-10-3, cementing 8-inch at 3620 ft. McCullough's Madgett 1, NWc 25-10-4, cementing 10-inch at 2410 ft. Central National Oil Co.'s Toney 1, C SW SW SW 28-10-4, sd 755 ft.

SEMINOLE COUNTY—Barnsdall-Phillips' Ingram 1, NEc SW 10-9-5, dr 3025 ft. Magnolia Pet. Co.'s Jackson 1, SWc NE 22-7-7, dr 310 ft. Pure Oil Co.'s Jonah 1, C E L NE NW NE 15-9-7, ur 2515 ft.

STEPHEN COUNTY — Lewis, Clarke & McCanghtry's Jefferson 1, SE NE 31-2-4, rig.

TILLMAN COUNTY—Oasis Drlg. Co.'s Snelling 1, SEc SE SE 13-1-6, sd 1400 ft. Tipton et al's Riverbed 1, C NE NE 1-5-5, cementing 6¾-inch cas, td 3200 ft.

TEXAS COUNTY—H. F. Wilcox's Zea 1, SWc SE 29-3-13, dr 2420 ft; Hovey 1, SEc SE 21-4-14, td 2229 ft, to standardize. Valerius O. & G. Co.'s No. 1, NWc SW 18-3-12, rigging up rotary, 170 ft; No. 2, SEc SE 32-5-12, dr 1000 ft. Foster, Reiter & Brann's No. 1, NE 10-2-11, rig. Foster-Reiter's No. 1, SEc SW 9-3-15, dr 385 ft. Allison, Garber & Pulse's 1, 4-1-12, dr 125 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's Martin 1, NWc 14-34-11, sd 1500 ft.

BARTON COUNTY—John Herron's Everleigh 1, SEc NE 22-18-3, sd 4550 ft. Huffins et al's Smith 1, NE SE NE 17-19-11, dr 4700 ft.

BUTLER COUNTY — Eyessen's Varner 1, NEc SW 29-25-4, dr 350 ft. Manhattan Oil Corp.'s Daley 1, SWc SE 25-24-6, lcn; Potts 1, NEc 29-24-7, dr 700 ft. W. M. Neeley O. & G. Co.'s Kiser 1, SW SE SW 12-26-7, td 2760 ft, sd.

CLOUD COUNTY—Concordie Oil & Prod. Co.'s Murdock 1, SEc 6-6-4.

COWLEY COUNTY—Phillips Pet. Co.'s Hunt 1, NEc 16-34-5, fsh 3250 ft. Branson et al's White 1, SEc SW SW 7-30-6, ur 10-inch 1560 ft. S. H. E. Petrol. Co.'s Day 1, NE NW 24-34-6, td 2690 ft.

GRAHAM COUNTY—Gruien & Shilers' Baker 1, NWc SE NW 17-10-24, rig.

LYON COUNTY—Connell et al's Ball 1, SEc SW NW 23-18-10, dr 1420 ft. Abel et al's Rednoor 1, SWc 11-18-12, lcn. Abel & Finney's De Long 1, NWc SW SW 22-18-12, 6-inch at 1540 ft. Culp et al's No. 1, SWc SE 25-19-10, rig. Bush, Eskridge 1, NE SE 36-19-11, sd 1765 ft. Troxell et al's Williams 1, NE SW 12-20-10, dr 1715 ft. Gordon et al's Stilwell 1, SEc 24-20-11, spud and sd. Connell et al's Lewis 1, SWc 4-20-11, lcn. Miss. Valley Oil Co.'s Neuman 1, C NW SE 25-20-11, sd 1150 ft. Connell et al's Welch 1, NEc SW 22-20-12, dr 620 ft. Gashe & Balliere, Stratton 1, SEc NW 32-20-13, lcn. Haviland et al's No. 1, SE NE NE 7-20-13, spud. Sheedy et al's Morris 1, NWc SE 19-21-10, td 2380 ft. S. W. Petrol. Co.'s Vorhees 1, SWc NW 34-21-10, ur 6-inch 2143 ft. Miss. Valley Oil Co.'s Langley 1, C SW SE 4-21-11, dr 1400 ft. Swartz's Tiles 1, SEc SW 29-21-12, rig. Phillips Pet. Co.'s Shepard 1, SW NW 29-21-13, dr 1040 ft.

OSAGE COUNTY—Baker et al's Lease 1, C SE SE 3-15-15, sd 260 ft. Rogers & Bittle's Berth 1, SEc NW SE 28-17-15, lcn. Mull-Vit Dev. Co.'s Neil 1, NWc NE SW NW 8-17-17, sd 2835 ft.

RENO COUNTY—Frank Hopper's Stevens 1, NWc 7-26-7, 8-inch 2945 ft.

RILEY COUNTY—Pawnee O. & G. Co.'s Marks 1, SWc NE NW 26-10-6, dr 2400 ft.

ROOKS COUNTY—Keys Pet. Co.'s Saidon 1, NWc SW SE 7-2-20, spud and sd. C. Findeiss et al's Minx 1, SWc 25-10-9, pb 3086 ft.

SALINE COUNTY—Thrall et al's Halquest 1, SEc NE NE 15-15-4, sd 1010 ft.

SUMNER COUNTY—Roxana Pet. Corp.'s Miller 1, NE SW 17-32-2, 6-inch 3090 ft. Wentz Oil Corp.'s Schwartz 1, NWc NE NE 27-34-2, dr 2100 ft.

WABAUNSEE COUNTY—Williams et al's Henderson 1, NEc SW NE 15-13-12, sd 3600 ft.

WOODSON COUNTY—Alter et al's Hunt 1, NWc SW 13-25-14, sd 700 ft.

PERMITS GRANTED FOR NEW WELLS

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

State—	May 1925	June 1925	July 1925	Aug. 1925	Sept. 1925	Oct. 1925	Nov 1925	Dec. 1925	Jan. 1926	Feb. 1926	Mar. 1926	Apr. 2	Apr. 9	Apr. 16	Apr. 23
Arkansas	279	212	214	113	73	82	44	58	63	80	106	30	16	26	22
California	149	124	153	97	63	119	87	125	140	126	116	36	52	9	20
Louisiana	44	50	52	41	60	58	45	54	87	104	145	36	27	25	25
Kansas	146	132	161	123	90	136	116	124	165	144	160	39	24	36	37
Oklahoma	470	418	387	215	248	318	315	329	391	322	419	136	114	115	114
Texas	796	829	918	756	745	856	627	865	743	756	817	277	172	173	230
Total	1884	1765	1885	1345	1315	1569	1234	1555	1589	1532	1763	554	405	384	448

OKLAHOMA

Carter County—Humble Oil & Refining Co. No. 1 Snyder center of the southwest of the southwest of the southwest of 34-1s-3w. Simpson and Fell No. 2 Gault, center of the southwest of the southwest of the northwest of 34-1s-3w, Simpson and Fell No. 3 Parnell, center of the northwest of the southeast of the northwest of 34-1s-3w, correction. Magnolia Petroluem Company No. 1 Noble, center of the southwest of the northwest of the northwest of 23-2s-2w. Amreada Petroleum Corporation No. 26 Farve, northeast corner of the northwest of the northwest of the southeast of 20-5s-1e.

Comanche County—Magnolia Petroleum Co. No. 3 Price, old well deepened, southwest corner of the northeast of 30-2n-9w.

Creek County—Gypsy Oil Co. No. 7 Ponds, southwest corner of the southeast of the southeast of 2-14-8. The Texas Company No. 4 Bruner, southeast corner of the southwest of the southeast of 12-14-8. Curtis Oil Co. No. 1 Fulson, southeast corner of the northeast of 4-19-9. Madden & Madden No. 1 Marshall, southeast corner of the southwest of the southwest of 30-18-10. Gypsy Oil Company No. 1-A McGuire, center of the east line of the northeast of the northeast of 1-18-11. E. L. Kistler No. 1-A A. C. Land, center of the southeast of the southwset of 12-18-11. Transcontinental Oil Co. No. 3 Barnett, center of the south line of the southwest of the northeast of 28-17-11. Iron Mountain Oil Co. No. 1 S. Lowe, southwest corner of the southeast of the southwest of 34-16-11.

Garfield County—Sinclair Oil & Gas Co. No. 43, North Walker, southeast corner of the northeast of 13-22-4w; Sinclair No. 44, North Walker, southeast corner of the northeast of the southeast of the northeast of 13-22-4w. Roxana Petroleum Corporation No. 3 Wolfe, old well deepened, southeast corner of the northwest of 13-22-4w. Healdton Petroleum Co. No. 19 Belveal, old well deepened, center of the east line of the northwest of the northeast of 24-22-4w. Sinclair No. 12 Belveal, old well deepened, center of the west line of the northeast of the northeast of 24-22-4w. Rox-

ana Petroleum Corporation No. 3-H Schroeder, southwest corner of the southeast of the southwest of the southwest of 18-22-3w. Roxana No. 8-H Schroeder, northeast of the northwest of the northeast of the southwest of 18-22-3w; Roxana No. 9-L Schroeder, southwest corner of the southeast of the southwest of 18-22-3w. Sinclair No. 27 West Kisner, northwest corner of 19-22-3w. Sinclair No. 28 West Kisner, northeast corner of the northwest of the northwest of 19-22-3w; Sinclair No. 29 West Kisner, northwest corner of the northeast of the northwest of 19-22-3w. Champlin Refining Co. No. 1-A, southwest corner of the northwest of the northwest of the northeast of 21-22-3w. Sinclair No. 6 Laura Crews (South) old well deepened, northeast corner of the southwest of 30-22-3w.

Garvin County—The Texas Company No. 1-B Deryden, northeast corner of the southeast of 17-1n-3w, correctoin.

Grady County—Carter Oil Co. No. 3 W. F. Dryden, center of the southwest of the northwest of 2-4n-8w. C. & O. Drilling Company No. 1 Smith, northeast corner of the northwest of the northeast of 24-3n-6w. Gant et al No. 1 Folson, southwest of the northwest of the southeast of 27-3n-5w. Carter Oil Company No. 1 Wham, northwest corner of the northeast of 34-3n-5. Clark, Cowden et al No. 2 Lindsey, old well deepened, center of the west line of the east half of the northeast of southwest of 35-3n-4w.

Hughes County—Josey Oil Company No. 2 Manley, northeast of the southwest of the northeast of 22-9-9. Magnolia Petroleum Co. No. 1 McCrary, southeast corner of the northeast of 29-8-9. Dixie Oil Company No. 3 M. Garner, southwest of the northwest of the northeast of 5-7-8. Amerada Petroleum Corporation No. 6 P. Harjo, center of the west line of the southeast of the northwest of 5-7-8. Amerada No. 7 P. Harjo, center of the east half of the northwest of 5-7-8; Amerada No. 8 Harjo, southwest corner of the southeast of northwest of 5-7-8. Magnolia Petroleum Co. No. 1 Street, northwest of the northeast of the southwest of 5-7-8.

Jefferson County—Josey Oil Company and Griffith No. 1 Holley, center of the northeast of 7-4s-8w. Homaokla Oil Company No. 1 Hunton, southeast corner of 5-4s-6w. Humble Oil & Refining Company No. 1 Alexander, northwest of the northeast of the northeast of 17-7s-5w.

Kay County—Comar Oil Company No. 3 Murphy, northwest corner of the northeast of the northwest of 28-29-1w; Comar No. 1 Payne, northeast corner of the southwest of 17-27-1w, Marland Oil Co. No. 1 School land, northeast corner of the southwest of 13-25-2w. Champlin Refining Company No. 2 Smithislev, center of the southwest of the northeast of the northeast of 21-24-1w.

Kingfisher County—Marland Oil Company No. 1, southwest corner of the northwest of 12-18-5w.

Lincoln County—Carter Oil Co. No. 1 West, southeast corner of the southwest of the southeast of 3-17-5. Empire Gas & Fuel Company No. 1 School land, southeast corner of 16-15-14. Gypsy Oil Co. No. 11 Caves, northeast corner of the northwest of the southeast of 35-15-5. Magnolia Petroleum Company No. 5 Belless, southwest corner of 3-14-5. Pure Oil Company No. 2 Strough, southeast corner of 4-14-5. Magnolia Petroleum Co. No. 2 L. Chapman, northeast corner of the northwest of the southeast of 10-14-5; Magnolia No. 2 M. & F. Chapman, northwest corner of the northeast of the southeast of 10-14-5. Phillips Petroleum Co. No. 6 Patterson, southwest corner of the northeast of 10-14-5. Gypsy Oil Co. No. 14 Caves, southeast corner of the southwest of the northwest of 11-14-5. Magnolia No. 3 Caves, southwest corner of the northwest of the southwest of 11-14-5.

Love County—Magnolia Petroleum Co. No. 1 Brown, southwest corner of the northwest of the southwest of 7-6s-2e.

Okfuskee County—Darby Petroleum Co. No. 2 Callahan, twin, northeast corner of the northwest of the souhtwest of 14-13-9; W. L. Umburn, No. 1 Holmes, northwest corner of the southwest of 36-11-11. Lou Umburn No. 1 Hill, northwest of the southeast of the northwest of 11-10-11, old well deepened.

Oklahoma County—Red Seal Refining Company No. 1 Meyer, northeast corner of the southwest of the northwest of the northwest of 15-14-2w.

Okmulgee County—C. E. Campbell No. 1-A Blair, center of the west line of the northwest of the southwest of 24-15-12. Kingwood Oil Co. No. 1 Kimble, northwest corner of the southeast of the northwest of 17-14-12. Kingwood Oil Co. No. 2 Arbitt, center of the northeast of the southeast of the northeast of 21-14-12. J. H. Rebold No. 1 Brown, old well deepened, southwest corner of 29-13-11. Simms Oil Co. No. 15 Rentie, twin, center of the west line of the southwest of the northwest of 31-12-12. Devonian Oil Co. No. 14 B. Wisener, northeast of the southeast of the southeast of 7-15-13. Jolly & Ogg No. 1 L. Alexander, southeast corner of the southwest of 16-15-14, old well deepened.

Osage County—Phillips Petroleum Co. No. 16, northeast corner of the southwest of 1-27-5. Phillips No. 12, northeast corner of 12-27-5. Peters Petroleum Co. No. 4, southwest of the northwest of the northwest of 17-27-6. Owen Osage No. 363, southeast corner of the southwest of 34-24-12. Sand Springs Home No. 1, center of the south line of the southeast of the northwest of 13-20-11.

Pawnee County—Adamson Coal, Oil and Gas Co. No. 7 Sigon, center of the south line of the southwest of the southwest of 32-21-8. Gypsy Oil Co. No. 18 Widener, southwest of the northeast of the southeast of 34-21-8. Magnolia Petroleum Co. No. 2 B. Fugate, northeast corner of the northwest of the southwest of 9-20-6. Magnolia No. 5 School land, old well deepened, southeast of the southwest of the southeast of 16-20-6. Magnolia No. 3 G. Baker, northwest of the southeast of the northeast of 17-20-6. Minnehoma Oil Co. No. 5 Childers, northeast corner of the southeast of the southwest of 7-20-8. Shortgrass et al No. 1 Turner, southwest corner of the northwest of the northwest of 18-20-8. Wasson & West No. 1 Shephard, southwest of the southeast of the southwest of 21-20-8. Selby Oil & Gas Co. No. 5 Van Emans, center of the west half of the northeast of the southeast of 23-20-8. McMahon Oil Co. No. 7 Hennessey, center of the west half of the northwest of the southwest of 24-20-8.

Payne County—A. A. Bailey and Superior Oil Co. No. 1 Barry, northeast corner of the southwest of 11-19-6. Texas Pacific Coal & Oil Co. No. 2 Nelson, northeast corner of the southeast of 22-18-3. T. C. M. Oil Company No. 3 Waltman, northwest corner of the northeast of the northwest of 26-18-3. Gypsy Oil Co. No. 1 Murkin, northeast corner of the northwest of 27-18-3. R. E. Freeman and Tiger Oil Co. No. 1-A Wrightsman, twin, section 22-18-7.

Seminole County—Mutual Oil Co. and Continental Oil Company No. 4 Pierce, old well deepened, northwest of the southwest of the southeast of 33-11-8. Sinclair No. 9 Yarbow, southwest of the northwest of the northeast of 4-10-8. Independent Oil & Gas Co. and Sinclair Oil & Gas Co. No. 3 Walker, northwest of the southeast of the southeast of 29-8-8, old well depeened. Mid-Continent Petroleum Corp. No. 1 X. Y. Z., northwest corner of 10-7-6. Independent and Atlantic Oil Producing Co. No. 2 R. Simon, northwest corner of the northeast of the northwest of the southwest of 5-7-8. Independent and Atlantic No. 3 R. Simon, center of the east half of the west half of the west half of 5-7-8. Magnolia Petroleum Co. No. 10 Harjo, center of the west half of the northwest of 5-7-8; Magnolia No. 11 Harjo, center of the southwest of the northwest of 5-7-8. Homaokla Oil Co. No. 6 Carolina, southeast corner of the northeast of 6-7-8.

Stephens County—Carter Oil Co. No. 7 Garvin-Simms, northeast corner of the northwest of the northeast of the northwest of 2-2n-5w. Illinois Okla Oil Co. No. 1 Funk, southwest corner of the southeast of the southeast of 19-1n-8w. Carter Oil Co. No. 7 Hardin, old well deepened, center of the west line of the southwest of the northwest of 30-1n-8w. Murphy Oil Co. No. 2 Payne, northeast corner of the southwest of the southwest of 2-1n-5w. C. and O. Drilling Co. No. 1-A Warner, northwest corner of the southeast of 22-1s-8w. Carter Oil Co. No. 1 Taliaferro, southwest corner of the southeast of 28-1s-8w. Winkler and McQueen No. 1-A Nelson, southwest corner of the northeast of 28-1s-8w. Inter-Ocean Oil Co. No. 9 Sheltop, southwest of the northwest of the southeast of 32-1s-8w.

Tulsa County—Gledden Oil Co. No. 1 Tuckabotche, northwest corner of the southeast of the northeast of 4-19-10. Sunray Oil Company No. 1-A Keefe, southwest of the southeast of the southwest of 31-19-12. A. C. Woody et al No. 1-A Brister, northwest corner of the northeast of the southeast of 33-18-13. L. Green et al No. 1 Frank, northeast corner of the northwest of the southwest of 16-17-14. Selby Oil & Gas Company No. 8 C. Russell, center of the west line of the northwest of the southeast of 14-16-13.

Waggnoer County—R. M. Lear No. 1 G. Childers, norhtwest corner of the southwest of 28-18-17. Flint Ridge Oil Co. No. 2 M. Abrams, center of the north line of the southeast of the northeast of 29-18-17. Mitchell Oil Co. No. 1 M. Harris, southwest corner of the southeast of 31-17-17.

ARKANSAS

Ouachita County—A. Meek Trust's LaGrone 4, 36-15-17, NWc NE¼ SW¼. Sunny Jim Oil Co.'s Hicks 3, 27-15-16, NWc SE¼ SW¼.

Union County—Atlantic Oil Prod. Co.'s Graham 3, 16-17-16, SWc N½ NE¼ SE¼; Slaughter 6, 9-17-16, center north line S½ NW¼ SE¼. Crestline Oil Co.'s Telford 1, 34-17-15, SWc E½ SE¼ NW¼. Foster et al's Moody 2, 15-17-16, SWc of section. Howell & Knowles' Springer 2, 36-17-16, SEc SE¼ NW¼. Humble O. & R. Co.'s Goodwin 1, 16-17-16, NEc NE¼ SW¼; Slaughter 2, 9-17-16, NEc of section. Keisker et al's Herold 2, 15-17-16, NWc SW¼ NW¼. Miller & Cottingham's Slaughter 4, 9-17-16, NWc W½ NW¼ NE¼. Owens et al's Slaughter 3, 4-17-16, NEc S½ SW¼ SE¼. Pure Oil Co.'s Slaughter 1, 4-17-16, 200 ft N and W of SEc N½ SW¼ SE¼. Roxana Pet. Co.'s Flournoy 2, 4-17-16, SEc of section. Simms Oil Co.'s Kilgore 1, 4-17-16, SEc N½ NE¼ SW¼; Moore 1, 16-17-16, 330 ft S and E of NWc NE¼ NE¼; Moore 2, 16-17-16, 330 ft N and E of SWc NE¼ NE¼; Moore 3, 16-17-16, NWc SE¼ NE¼; Moore 4, 16-17-16, SWc SE¼ NE¼. Wingfield et al's Slaughter 9, 9-17-16, SEc NE¼ SE¼; Slaughter 10, 9-17-16, center south line N½ NW¼ SE¼. Woodley et al's Dumas 3, 9-17-16, NEc NE¼ NW¼.

KANSAS

Butler County—Empire Gas & Fuel Co.'s No. 30 Finney, southeast corner of the northwest of the northwest of 29-25-5. Phillips Petroleum Company No. 1 Phillips-Kruse, southeast corner of the northwest of the northwest of 27-27-7. Federal Oil Co. No. 7 Laughlin, southwest corner of the northwest of the southeast of the northeast of 13-27-7. Phillips No. 1 Pettit, southeast corner of 17-28-6.

Chase County—Skelly Oil Co. No. 1 Eastham, northeast corner of the southeast of 24-22-8. Phillips Petroleum Co. No. 1 Hughes, southwest corner of the northwest of the northwest of 15-22-9.

Cowley County—Carter Oil Co. No. 10 Waite, southwest corner of the northeast of the southeast of 19-32-3. T. B. Slick No. 6 Carson, old well deepened, northeast corner of the southeast of the northeast of 19-32-3.

Elk County—Theta Oil Co. No. 1 Walter, old well deepened, northwest corner of 26-31-10.

Greenwood County—Day et al No. 1 Fuller, southeast corner of the southwest of the southwest of 1-22-10. Mid-Kansas Oil & Gas Co. No. 4 Pixlee, northeast corner of the southwest of the northwest of 8-22-10. Davis, Hazlett et al No. 16 De Malorie, southwest corner of the southeast of the northeast of 12-22-10. Syndicate Oil Company's No. 3 Austin, southwest corner of the northeast of the northwest of 12-22-10. Simmons et al's No. 4 Harris, southwest corner of the northeast of the northwest of 19-22-11; Simmons et al No. 8 Frankhauser, southeast corner of the southwest of the southeast of the northwest of 4-22-12; Simmons et al No. 3 "B" Funkhauser, northwest corner of the southeast of 4-22-12. Henderson, Holdren et al No. 1 Bell, southeast corner of the northwest of 19-22-13. Simmons Rhodes No. 1 Luther, southeast corner of the southwest of 29-22-13. Manhattan

Oil Corporation No. 8 "B" Dales, southwest corner of the northwest of 25-23-8, old well deepened. Skelly Oil Company No. 6 E. Teter, southeast corner of the northwest of the northeast of 15-23-9; Skelly Oil Co. No. 2 Yeager, northwest corner of the northeast of the northwest of 4-23-11. Mid-Continent Petroleum Coropration No. 8 Shadel, center of the south line of the southwest of 15-23-13. Mid-Continent Petroleum Corporation No. 9 Shadel, center of the west line of the east half of the west half of the southwest of 15-23-13. McGinnis et al No. 4 "C" Wiggins, northeast corner of the southeast of the northwest of 30-24-11.

Harper County—Wakefield et al No. 1 Muir, southeast corner of the southwest of the southeast of 28-31-9w. Merritt et al No. 1 Thompson, northeast corner of 24-32-7w.

Lyon County—Holmquist et al No. 1 Sutton, southwest corner of the northeast of 1-16-12. Ritchey & Moore No. 1 Bender, northwest corner of the northeast of 32-18-10; McCain et al No. 1 McCormick, southwest corner of 15-20-11. Sheedy et al No. 1 Richards, northwest corner of the southeast of 7-21-10. Transcontinental Oil Co. No. 3 Atyeo, southeast corner of the southwest of the southwest of 30-21-10. Transcontinental Oil Co. No. 4 Atyeo, northwest corner of the southeast of the southwest of 30-21-10. Transcontinental Oil Co. No. 5 Atyeo, northwest corner of the nrtheast of the southwest of 30-21-10. Transcontinental No. 1 "A" Atyeo, northwest corner of the northeast of the northwest of 31-21-10. Transcontinental No. 2 "A" Atyeo, southeast corner of the northwest of 31-21-10.

Reno County—Marland Oil Co. No. 1 O'Neil, center of the southwest of 7-23-6w.

Rice County—Phillips Petroleum Co. No. 1 Walstein, northwest corner of the southeast of 2-21-6w.

Sumner County—Roxana Petroleum Corporation No. 1 Churchill, northeast corner of the southwest of 25-31-2e.

CALIFORNIA

Brea Olinda—Union Oil Co.'s Stearns 68, 6-3-9.

Coalinga—Standard Oil Co.'s No. 115, 25-20-14. Premier Oil Co.'s No. 16, 24-20-14.

Kern River—Marland Oil Co.'s Cauley 139, 16-28-27.

Kern County — Milham Exploration Co.'s Hyde 1, 16-28-23.

Long Beach—Keck Synd.'s No. 5, Modoc L. B. 5, 13-4-13. Geo. F. Getty, Inc.'s Long Beach 16, 13-4-13. Julian Pet. Corp.'s Hughes 1, 13-4-13. General Pet. Corp.'s K. & H. 7, 19-4-12.

Midway—Honolulu Cons. Oil Co.'s No. 64, 4-32-24. Associated Oil Co.'s No. 2, 20-31-23. California Star Oil Co.'s No. 10-A, 26-31-22. Standard Oil Co.'s No. 41, 29-31-24; No. 55, 19-31-24; No. 53, 33-31-24; No. 62, 31-31-24.

Newport—Julian Pet. Corp.'s Mesa 6, 21-6-10. Bar-Mor Pet. Corp.'s No. 1, 21-6-10.

Santa Fe Springs—General Pet. Corp.'s Santa Fe 20, 5-3-11.

Ventura—Shell Co.'s Edison 8, 28-3-23.

LOUISIANA

Bossier Parish—Autrey Oil Co.'s G. W. Smith B-1, 15-19n-11w, 560 ft N and 100 ft W of SE corner of section.

Caddo Parish—Gulf Ref. Co. of La.'s Ferry Lake 233, 16-20n-16w, 1020 ft N and 300 ft E of center of section; Ferry Lake 234, 15-20n-16w, 1020 ft N and 300 ft E of SW corner of section. Lewis Oil Corp.'s D. H. Raines 14, 22-21n-15w, 150 ft S and 150 E of NW corner SW¼ of NE¼; D. H. Raines 15, 22-21n-15w, 150 ft N and 150 ft W of SE corner of NE¼. E. W. McGoldrick's Murray 8, 14-21n-15w, 710 ft N and 710 ft E of SW corner of section.

Calcasieu Parish—Vinton Petroleum Co.'s Gray-Rescue 19, 4-11s-12w, 445 ft S and 57 ft W of NE corner of section; Gray 28, 33-10s-12w, 113 ft S and 44 ft W of NE corner SE¼ of SE¼.

De Soto Parish—J. P. Evans' La. Land & Inv. Co. No. 1, 15-21n-14w, 192 ft S and 192 ft W of NE corner NW¼ of SE¼. A. H. Tarver's Mathews B-1, 29-12n-11w, 200 ft N and 200 ft E of SW corner SE¼ of SW¼.

La Salle Parish—J. T. Cox's Herbert 1, 26-10n-1e, 320 ft E and 72 ft S of NW cor SE¼ of NE¼; Herbert 2, 26-10n-1e, 320 ft S and 75 ft E of NW cor of SE¼ of NE¼; Fee 1, 26-10n-1e, 722 ft N and 41 ft E of SW cor or SE¼ of NE¼. Dixie Oil Co.'s Urania Lbr. Co. 6, 24-10n-1e, 600 ft N and 660 ft E of SWc SE¼. Hamilton et al Volk 2, 26-10n-1e, 741 ft N and 510 ft W of SE cor SE¼ of NE¼. H. L. Hunt, Inc.'s State 2, 26-10-1e, 150 ft S and 150 ft W of NE cor NW¼ of NE¼. Clyde Mitchell's Herbert 2, 26-10n-1e, 280 ft S and 555 ft W of NE cor NE¼ of SE¼. Natural Gas & Fuel Corp.'s Urania B-2, 18-10n-2E, 150 ft S and 660 ft W of NE cor of sec; Urania B-3, 18-10n-2e, 200 ft N and 200 ft E of SW cor NE¼ of NE¼. The Ohio Oil Co.'s Urania Lbr. Co. 8, 13-10n-1e, 200 ft N and 200 ft W of SE cor NE¼ of NE¼. H. R. Smith's Hardtner 1, 22-10n-4e, 150 ft to S and 150 ft W of NE cor of NW¼.

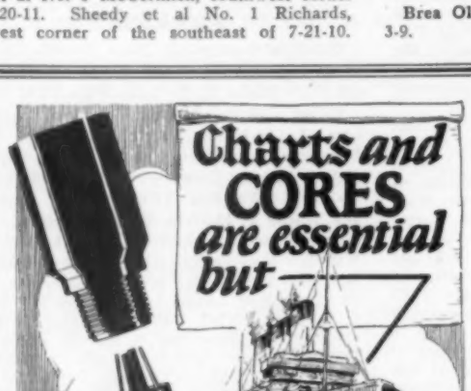
Ouachita Parish—The Palmer Corp.'s W. F. Millsap 1, 36-20n-4e, 660 ft N and 613 ft W of SE cor of sec.

Sabine Parish — L. M. Emlet's Bowman-Hicks 7, 14-7n-14w, 420 ft N and 334 ft E of SW cor SW¼ of SE¼; Sabine Lbr. Co. 1, 8-7n-13w, 409 ft E and 487 ft N of SW cor SE¼ of NE¼.

Webster Parish—Southern Crude Oil Purch. Co.'s Munn-Wadley 1, 1-22n-10w, 990 ft S and 320 ft W of NE cor SE¼ of NW¼.

TEXAS

Archer County — Shasta Oil Co., Wichita Falls, C. A. Mangold 1, B 21, Lazarus sur; 3, same sur; 4, same sur. Dale Oil Corp., Wichita Falls, L. F. Wilson 2, S 22, P. Siegle sur, 150 ft to E and 450 ft to S line. Shappel Oil Co., Wichita Falls, L. F. Wilson 4A, B 25, American Trib. sur, 450 ft to N and 750 ft to E line. Cosden & Consolidated Oil Co., Staley Bldg., Wichita Falls, J. Crosslin 1, B10, J. W. Harris sur, 450 ft to E and 150 ft to S line; S. E. Oldham A6, B H, J. W. Harris sur, 150 ft to N and W lines. Independent Oil & Gas Co., Fort Worth, D. L. Wolf 4, B 2, J. Poitevent sur, 300 ft S No. 2. Humble Oil & Ref. Co., Wichita Falls, D. L. Wolf 5,



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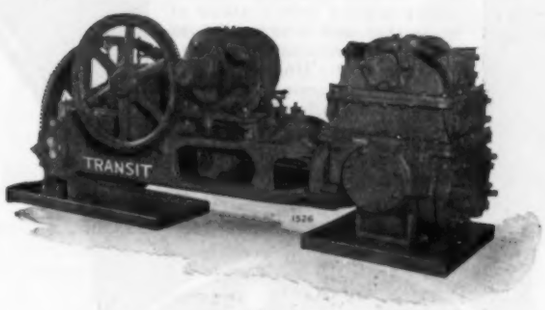
S 1, S. P. Ry sur, 300 ft S No. 4; G. B. Hamilton 8, Lot 1, Crawford sur, 300 ft S No. 7. Perkins & Cullum, Wichita Falls, J. L. Anderson 14, B 22, S. Anderson sur, 150 ft to S and E lines. McCarty Oil Co., Bob Waggoner Bldg., Wichita Falls, L. F. Wilson 24, E. Hall sur, North of No. 17. Riner & Bailey, Wichita Falls, T. E. Moss 1, S 1, HT &B Ry sur. Mark Kleedon, Bradford Bldg., Wichita Falls, H. N. Birdwell 2, C. Wright sur, 300 ft E No. 1. Magnolia Pet. Co., Dallas, L. Miller 1, B 70, Amer. Trib. sur, 750 ft to W and 150 ft to S line; H. Rogers 15, 2407 TE&L sur, 150 ft to N and W lines. Texas Co., Wichita Falls, D. L. Wolf 1, S 1, S. P. Ry sur, 750 ft to N and 150 ft to E line. Oil Investment Co., Staley Bldg., Wichita Falls, Fee 1, Lot 14, J. Richards sur, 1669 ft to N and 150 ft to E line. E. L. Smith Oil Co., Mexia, Cowan 13, B 50, J. C. S. L. sur, 150 ft to N and W lines. Bridwell & Mayfield, Wichita Falls, G. B. Hamilton 1, B 1, Holman sur, 150 ft to N and 1050 ft to E line. King, Corlett & White, Staley Bldg., Wichita Falls, L. F. Wilson 7, B 85, Amer. Trib. sur 322 ft to W and 301 ft to N line. Rowe Drilling Co., Wichita Falls, W. T. Hutcheson 1, B123, Amer. Trib. sur, 150 ft to N and 600 ft to W line. L. W. Tarkington, Perkins-Snyder Bldg., Wichita Falls, H. O. Prideaux 1, B J, S 15, T&P Ry sur, 150 ft to N and 200 ft to E line. Texhoma Oil & Ref. Co., Wichita Falls, C. L. Abercrombie 3, S. P. Ry sur, 150 ft to E and 803 ft to S line; J. F. Rogers 6, 2407 TE&L sur, 1083 ft to E and 150 ft to S line; D. L. Wolf 4, S. P. Ry sur, 450 ft to N and 150 ft to W line. Gulf Prod. Co., Fort Worth, A. P. Nichols 33, S 37, Amer. Trib. sur, 393 ft E No. 30; 34, same sur, 500 ft W No. 28; 32, same sur, 441 ft W No. 29; N. W. Jackson 7, S 37, W. B. Aldridge sur, 300 ft S No. 5; Power Bk. Co. 6, S 123, Amer. Trib. sur, 400 ft E No. 1; P. Campbell 7, 1452 TE&L sur, 300 ft S No. 6; A. P. Nichols 35, S 37, Amer. Trib. sur, 602 ft to S and 2801 ft to W line; F. L. Anderson 1, S 19, Anderson sur, 1318 ft to N and 150 ft to E line. Woodburn Oil Corp.'s Magnolia Bldg., Dallas, L. F. Wilson 27, B 26, Amer. Trib. sur, 300 ft W No. 14.

Brown County — Wear, Counts, & Harris, Brownwood, W. J. Livingston 2, No. 614 M. Flores sur, 300 ft N No. 1. E. M. Curry, Cross Plains, G. W. Pickett 1, G. Logan sur, 750 ft to N and 150 ft to E line. J. S. Cosden, F & M Bank Bldg., Fort Worth, A. Williams 1, A. May sur, 99 ft to W and 150 ft to E line; R. L. Westerman 7, N. B. Mitchell sur, 150 ft to N and 1149 ft to W line; 8, same sur, 150 ft to N and 1449 ft to W line. Alford Oil Co., Mercantile Bank Bldg., Dallas, J. E. Perkins 1, M. Strouse sur, 750 ft to S and 450 ft to W line. J. K. Hughes Dev. Co., Mexia A. T. Arledge 5, N. B. Mitchell sur, 300 ft to E No. 4, 6, same sur, 300 ft to E No. 3; 7, same sur, 300 ft W No. 4. S. C. Henry, Cross Plains, A. R. Prater 2, B 145, W. L. Swain sur, 150 ft to N and 325 ft to E line. J. K. Hughes Dev. Co., Mexia, A. T. Arledge 8, N. B. Mitchell sur, 340 ft E No. 6. Kone Prod. Co., 324 French Place, San Antonio, G. Hickman 1, No. 783 T. Benson sur, 150 ft to S and E lines. States Oil Corp., Eastland, E. Eubanks 1, S 141, R. Mitchell sur, 175 ft to N and 2277 ft to E line. E. L. Smith Oil Co., Mexia, B. F. Dunn 2, Delgado sur, 450 ft to S and 150 ft to W line. F. H. Crow et al, 2302 S. Ewing St., Dallas, Minors 1, B 614, M. M. Flores sur, 150 ft to S and W lines. Conway Bros. et al's Cross Plains, F. W. Pickett 7, G. Logan sur, 330 ft E No. 5. Phillips Pet. Co., Bartlesville, Okla., B. F. Dunn 1, S 12, J. Delgado sur, 165 ft to E and 150 ft to N line; 2, same sur, 285 ft W No. 1. Quinn & O'Brien, Cisco, G. B. Gaines 1, 148 W. B. Travis sur, 150 ft to S and E lines. Wear, Counts & Shuler-Davies, Brownwood, M. Nichols 1, 614 M. M. Flores sur, 150 ft to S and E lines. Conway Bros. et al, Cross Plains, G. W. Pickett 6, 147 G. Logan sur. Anderson, Shulte & Evans, Rising Star, C. P. Dunn 1, B 10, J. Delgado sur, 150 ft to N and W lines. J. M. Hickey, Cisco, J. T. Woods 1, S 26, B 790, H. P. Brewster sur, 150 ft to N and 200 ft to W line. Texas Co., Cisco, B. F. Dunn 9, S. 12, J.

ALL COST MONEY

Steam Lines—Exhaust Lines Steam Line Losses



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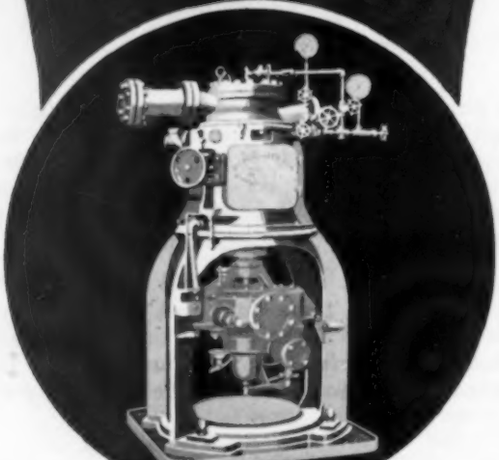

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WE HAVE A SPECIAL TOOL STEEL FOR EVERY SPECIFIC PURPOSE.

Delgado sur, 450 ft to N and 750 ft to E line. Humble Oil & Ref. Co., Cisco, B. F. Dunn 4, J. Delgado sur, 292 ft E No. 3; 5, same sur, 150 ft to N and 442 ft to E line; 6, same sur, 150 ft to N and E lines; 8, same sur, 150 ft to S and E lines; 10, same sur; 9, same sur, 294 ft W No. 8; 11, same sur, 442 ft to W and 150 ft to S line; 12, same sur, 150 ft to S and W line.

Bexar County—R. J. Kieffer, 1523 N. Alamo St., San Antonio, L. Callison 1, B 10, Southton Park center of lot 46. Jonray Oil Co., Box 510, San Antonio, S. Sueltenfuss 1, No. 98 Tinsley sur, SE cor. Associated Pet. Co., Fort Worth, C. A. St. John 4, A. J. Avant sur, 500 ft E No. 3; A. R. Caruthers 5, W. Caruthers sur, 525 ft N No. 4. Marland Oil Co., Travis Bldg., San Antonio, J. Mihalski 1, M. Bustillo sur, 396 ft to SE and 450 ft to SW line.

Callahan County—H. I. Stock, Cisco, A. D. Williams 6, 2268 TE&L sur, 150 ft to N and E lines; 7, same sur, 150 ft to N and 450 ft to E lines. R. P. Dorian, 1504 Tilden, Wichita Falls, J. M. Isenhour 1, 2299 TE&L sur, 150 ft to S and W lines. Canyon Oil & Gas Co., Inc., Cross Plains, D. H. Derrington 2, W. G. Anderson sur, 150 ft to N and W lines. Pocohontas Pet. Co., Eastland, S. F. Ingroam 2, S 19, Bayland Asy. sur, NE cor. W. J. House, Moran, Wagley-Eubanks 10, 2039 TE &L sur, 600 ft S No. 3. Texas Co., Cisco, G. H. Clifford 27, 3151 TE&L sur, 132 ft to S and 565 ft to E line. J. A. Jones, Moran, L. W. Warren 1, 2039 TE&L sur, 1060 ft to N and 150 ft to W line. Sprawls, Harwell & Cook, Abilene, G. Wagley B5, S 3, D&D Asy. sur, NE cor. Phillips & Milam, Chelsea, M. Isenhour 1, 2274 TE&L sur, 1320 ft to S and 150 ft to E line. Roeser & Pendleton, Inc., Fort Worth Club Bldg., Fort Worth, L. E. Young 1, S 3, BBB&C Ry sur, SW cor. F. L. Dyer, Shreveport, La., J. Wagley 11, 2996 TE&L sur. Thompson & Cocke, Cross Plains, Ramsey 2, 2282 TE&L sur, 300 ft E No. 1. L. M. Hadley, Baird, C. S. Dille 3, S 52, 150 ft to N and 440 ft to E line.

Coleman County—Kirby Pet. Co., Box 1475, Houston, G. E. Younglove 1, J. W. Hicks sur, 250 ft to S and E lines. Canyon Oil & Gas Co. & Cromwell Oil & Gas Co., Cross Plains, J. W. Harris 26A, J. Sanders sur, 600 ft S No. 9. Archie Shaw, Burkett, W. T. Burns 6, B 1, A. Wickson sur, 750 ft to N and 936 ft to E line. Shamrock Bradshaw, Cross Plains, J. C. Watson 1, 163 Wm. Mason sur, 1050 ft to E and 150 ft to S line.

Carson County — Gibson Oil Corp., Massie Bldg., Amarillo, G. W. Witter 1, S 1, B 7, I&GN Ry sur, 660 ft to N and E lines. Gulf Prod. Co., Fort Worth, S. B. Burnett 12, S 116, B 5, I&GN Ry sur, 450 ft to N and E lines. American Ref. Co., Wichita Falls, S. B. Burnett 7, B 5, S 115, I&GN Ry sur, Amatex Oil Co., Amarillo, E. S. Poling 1, S 22, B Y2, T&T sur, NW cor.

Caldwell County—United North & South Oil Co., Luling, W. H. Tabor 24, N. Reaville sur, 340 ft NE No. 10; D. F. Stair 12, J. Henry sur, 300 ft NW No. 11.

Cherokee County — Humphreys-Colliton Co., Mason Bldg., Houston, P. O. Clapp 2, R. R. Jowell sur.

Chambers County — Mills Bennett, Second Nat. Bank Bldg., Houston, A. E. Barber 1, H. Griffith sur, 375 ft to W and 75 ft to N line.

Duval County—Cintex Pet. Co., Laredo, R. V. Benavides 5, S 10, B 16, Arispe sur, 300 ft SW No. 4. Simms Oil Co., Magnolia Bldg., Dallas, R. Schallert 1, Part 81, 239, 241, 900 ft to N and 1600 ft to W line; J. T. Dinn 1, 666 sur.

Eastland County—Texas Pacific Coal & Oil Co., Ranger, Fee 1, C. L. Durocher sur, 2205 ft to S and 2657 ft to E line. Mook-Texas Co. & Bradstreet, Box 411, Cross Plains, G. T. Burler 1, D. E. Holloway sur, 160 ft to E and 460 ft to S line.

Gray County—H. F. Wilcox, Tulsa, Okla., J. H. Wilson 1, S 95, B 3, I&GN Ry sur, 330 ft to N and E lines.

Hutchinson County—Dixon Creek Oil Co., Inc., Amarillo Bldg., Amarillo, H. E. Smith

21, S 12, B Y, M&C sur, 330 ft to S and E lines. American Ref. Co., Wichita Falls, G. A. Whittenburg 2, B 4, D&SE sur. L. C. Young, Fayette Bldg., Lexington, Ky., J. C. McConnell 1, S 65, B 4, I&GN sur, 330 ft to S and E lines. Prairie Oil & Gas Co., Ranger, Johnson 1, S 4, B B-4, D&SE sur, 470 ft to N and 1624 ft to W line. Derby & Haines, Alva, Okla., J. B. Johnson 1, 1 M. Whitley sur, 330 ft to N and 267 ft to W line. Derby, Haines & Williams, Amarillo, J. B. Johnson 1, S 20, B Y, sur, NE cor. Phillips Pet. Co., Bartlesville, Okla., A. Stevens 1, S 72, B 46, H&TC Ry sur, 990 ft to S and W lines. Double 5 Oil Co., Amarillo, S. Cockrell 1, S 2, B Y, M & C. sur, 330 ft to N and W lines. J. E. Crosbie, Central Nat. Bank Bldg., Tulsa, Okla., J. A. Whittenburg 1, B Y, S 12, M & C 320 ft to N and W lines. Dixon Creek Oil Co., Inc., Amarillo Bldg., Amarillo, A. E. Smith 7, S 11, B Y, M&C sur, 660 ft N No. 6; J. E. Smith 18, S 14, B Y, M&C sur, 330 ft to S and W lines; 29, S 5, B Y, 300 ft to S and E lines; 6, S 11, B Y, 660 ft N No. 5; 5, same sur, 330 ft to S and E lines.

Harrison County—C. H. Lyons, Ardis Bldg., Shreveport, La., L. Rudd 1, W. R. Anderson sur, 200 ft to W and 300 ft to S line. McKinnon Oil Ass'n, Wilson Bldg., Dallas Texas, J. Taylor 1, B L W. H. Payne sur, 150 ft to N and W lines.

Harris County—Gulf Production Co., Houston, A. A. Wright 7, A. A. Wright sur, 230 ft W No. 5; Beaumont Pet. 33, Lee Hager sur, 30 ft SE No. 19; T. R. Taylor 11, J. Hamilton sur, 300 ft S No. 9.

Hardin County—Gulf Production Co., Houston, King 167, F. H. Green sur, 250 ft E No. 166. M. E. Pivoto, Sour Lake, Carpenter 10, S. Jackson sur, West central.

Haskell County—Bridwell & Heydrick, Wichita Falls, E. R. Bunkley 1, No. 16 Wm. Dennis sur, 2840 ft to E and 200 ft to N line.

Jim Hogg County—Simms Oil Co., Magnolia Bldg., Dallas, C. Palacios 2, S. C. Hedricks sur, 476 ft to W and 150 ft to S line. M. Leyendecker 1, S 143, B 7, AB&M sur. K. & S. Corp., Laredo, R. Holbein 30, S 11, B 22, Las Animas sur, 660 ft E No. 1; No. 21, 1030 ft NE No. 29; No. 32, 470 ft SW No. 1, No. 33, 300 ft N No. 1. J. W. Pippin, Hebronville, C. Palacios 2, No. 291, B 15, NW corner. Magnolia Pet. Co., Dallas, B. de la Garza 3, S 291, S. C. Hendrix sur, 150 ft to N and W lines; No. 4, 300 ft E No. 1. Merchants Bank 4, No. 267 A. M. Fite sur, 150 ft to center of E line.

Jack County—A. P. Nicholson & Fraley, Insurance Bldg., Dallas, B. M. Gay 1, S 1, B 4, S. P. Ry. sur, NW corner. Dublin Dev. Co., Dunn Bldg., Ft. Worth, Thomason 1, S 577, G. Hardesty sur, 200 ft to S and E lines.

Jefferson County—Porch & Telschow, Houston, Chronicle Bldg., Trembley 3, B 7 J. A. Veatch sur, 100 ft to N and 10 ft to W line. Unity Oil Co., Beaumont, Lee 44, B 23, J. A. Veatch sur, E central.

Liberty County—Gulf Production Co., Houston, A. C. Baldwin 17, J. Devore sur, 125 ft N and 250 ft E No. 16; J. L. Thomas 3, J. Devore sur, 111 ft to W and 326 ft to N line. Republic Production Co., Houston, Dolbear 125, J. Devore sur, 2706 ft to N and 1912 ft to E line; No. 126, 4019 ft to N and 2227 ft to E line; No. 127, 2310 ft to E and 850 ft to S line; No. 128, 2256 ft to N and 2587 ft to E line.

Milam County—Alexander & Lyles, Amer. Exchange Nat. Bank Bldg., Dallas, A. Seelke Est. 1, P. Sapp sur, 150 ft to N and W lines.

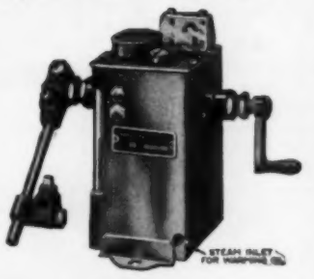
Montague County—Texas Co., Wichita Falls, A. B. Oldham 6, J. Chambliss sur, 385 ft W No. 5; J. W. Cunningham 2, J. Hodges sur, 200 ft to W and 750 ft to S line. Pure Oil Co., Mexia, M. W. Maddox 3, H. S. Arnold Fort Worth, J. W. Cunningham 4, J. N. Hodges sur, 498 ft E No. 2. Gulf Production Co., sur, 300 ft S No. 3; No. 5, 300 ft S No. 4. Owenwood Oil Co., F. & M. Bank Bldg., Fort Worth, C. Gist 1, J. Chambliss sur, 150 ft to S and W lines. A. R. Agee, Nocona, A. T. Holland 1, B 7, K.C.S.L. sur, 600 ft to N and E lines. Humphreys Corp., Mason Bldg., Houston, N. J. Howard 3, J. Chambliss sur, 400 ft S No. 2.

Medina County—Schermerhorn Oil Co., Cos-

This Lubricator Is Built For Oil Field Service

It is designed to stand the rough usage to which all machinery is subjected in the oil field.

You can't waste oil with it and after it is installed, you can forget all about your lubrication problems. The "Manzel" will take care of the lubrication and take care of it right, too.

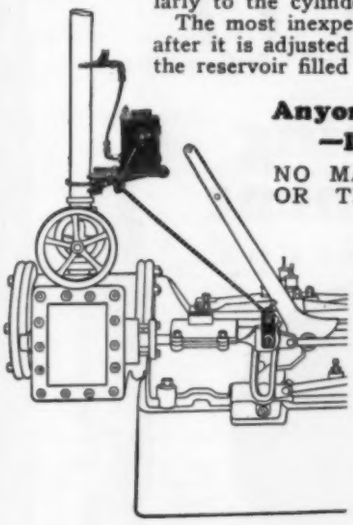


The "Manzel" Force Feed Lubricator

Lubricates drilling engines, mudhogs, air and gas compressors, pumps, etc., automatically and cuts down oil bills 30 to 60%.

No matter how cold or warm the weather may be, what grade of oil you use, how fast or slow you operate your engines or what steam pressure you carry, the "Manzel" Lubricator will supply the oil regularly to the cylinders and in just the right quantity.

The most inexperienced helper can take care of it, for after it is adjusted there is nothing to do except to keep the reservoir filled with oil.



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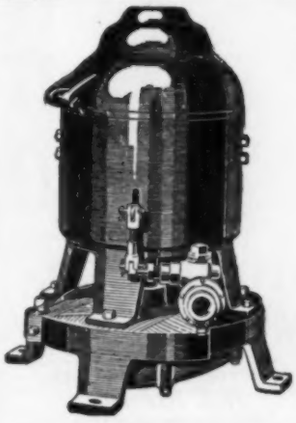

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den Bldg., Tulsa, Okla., San Antonio Trust Co. 1, S 31, J. Degant sur. K. Reager, Uvalde, G. Shreiber 1, No. 115 BFL&M Co. sur, 750 ft to N and 150 ft to W line. Robt. S. Yantis, 321 Broadway, San Antonio, L. Haegelin 1, B 172, No. 1473 sur, SW corner.

McCulloch County — Harris, Kennedy & White, Cisco, Pumphries 1, S 106, C. Mendel sur, 150 ft to N and W lines; N. Pumphries 1, No. 813 sur, 150 ft to S and W lines; White Co. 3, No. 699 sur, 150 ft to N and W lines; 4, S 1, BS&H sur, 150 ft to N and W lines.

McMullen County—F. J. Darlington, Whitsett, Farmers Ins. Co. 1, No. 463 and 155 sur, 150 ft to S and 4000 ft to E line.

Moore County—Lee Flowers, Staley Bldg., Wichita Falls, J. T. Sneed 1, S 25, B 1, J. Poitevent sur, center.

Marion County—O. G. Murphy, El Dorado, Ark., W. D. Chew 1, No. 150 S. F. sur, 150 ft to S and W lines.

Orange County—Gulf Production Co., Houston, F. T. Peveto 9, Wm. Dyson sur, SE cor.

Reagan County—Big Lake Oil Co., Best, University 1-B, S 1, B 2, 243 ft N No. 43; 2-B, 270 ft S No. 41; 4-B, 250 ft S No. 39; 7-B, S 25, B 9, 250 ft E No. 36; A-3, S 36, B 9, 250 ft N No. 21; A-4, 250 ft N No. 20; A-5, 250 ft N No. 19; A-6, 250 ft E No. 14; 73, S 1, B 2, 735 ft NW No. 51; 74, 800 ft N No. 15; 75, 1320 ft NE No. 65.

Shackelford County—Roberts, Chadwick & Payne, Breckenridge, Arndt 6, 597 TE&L sur, 460 ft to SE and 440 ft to SW line. Snyder, Moutray & Sons, Cisco, M. Griffith 8, S 37, LAL sur, 350 ft to W and 600 ft to S line. Magnolia Petroleum Co., Dallas, E. Meyer 1, B 86, ET Ry sur. Moutray Oil Corp. and Reiter-Foster Oil Corp., Cisco, C. B. Snyder 1-C, S 59, LAL sur, 150 ft to N and E lines; L. M. Griffith 9, S 37, LAL sur, 300 ft SW No. 6. Smith & Brady, Box 1083, Vernon, J. B. Matthews 1, S 28, ET Ry sur, 170 ft to N and E lines. Meredith Oil & Gas Co., Moran, L. T. Wild 8, S 15, Univ. Lands sur, 300 ft E No. 7. W. B. Ashley, Moran, T. E. Hayden 1, S 115, Univ. Lands sur, 150 ft to N and W lines.

Stephens County—Stacy, Vaughn & Meredith, Kirby Bldg., Dallas, N. W. Talle 1, S 458, SP Ry sur, 750 ft to E and 150 ft to S line. Robert Oil Corp. & Pettit & Adkisson, Breckenridge, M. H. Thorpe 1, S 453, SP. Ry sur. Republic Production Co., Houston, M. C. Knox 7, S 5, B 5, T&P Ry sur, 300 ft E and 200 ft N No. 2.

Travis County—Gulf Production Co., Houston, A. Carlson 1, L. Kimbro sur, 1400 ft to W and 150 ft to N line.

Wichita County — Bridwell & Heydrick, Wichita Falls, Waggoner Bros. 3, B 20, H. George sur, 150 ft to W and 861 ft to N line. J. F. Long, Wichita Falls, W. Overby 2, J. M. Sharp sur, 50 ft N No. 1. Dr. C. E. Bailey, Wichita Falls, H. Willis 1, C. Winters sur, 150 ft to S and W lines. S. M. Winters, Wichita Falls, Roller 25, W. A. Grady sur, 300 ft W No. 9. Rio Bravo Oil Co., S. P. Bldg., Houston, Fee C-14, S 31, B 5, H&TC Ry sur, 350 ft W No. 3C3. Humble Oil & Ref. Co., Wichita Falls, Waggoner 3, S 8, B 7, GH&H Ry sur, 450 ft to W and 150 ft to S line. National Pet. & Ref. Co., Wichita Falls, E. F. Gaston 4, J. Rector sur, 466 ft to W and 20 ft to N line. J. J. Moran, Staley Bldg., Wichita Falls, W. Burnett 1, W. M. Williams sur, 1050 ft to E and 700 ft to S line. R. M. Armstrong et al, 1206 Grace St., Wichita Falls, McCormick 2, S 13, H&GN Ry sur, 150 ft to E and 735 ft to S line. Magnolia Petroleum Co., Dallas, C. L. C. Pratt 17, HT&B Ry sur, 300 ft S No. 16. Rayzor & Panhandle Ref. Co., Wichita Falls, Kemp & Kempner 1, B 14, WVFL sur, 150 ft to S and E lines. Culbertson Co., City Nat. Bank Bldg., Wichita Falls, J. & J. Waggoner 38, S 13, BS&F sur, 350 ft SW No. 31. Brown & Gwin, Box 839, Wichita Falls, S. Mitchell 6, P. Castleman sur, NE corner. Apple-Brandeberry Oil Co., Wichita Falls, G. Jennings 19-A, S 12, HT&B Ry sur, 50 ft N No. 12. Bullington, Lee & Pendleton, Wichita Falls, G. Jennings 17, S 12, HT&B Ry sur, 120 ft S No. 16. J. W. Ginsburg, Staley Bldg., Wichita Falls, W. L. Doyle 1, G. Wheelwright sur, 150 ft to W and 750 ft to S line. R. R. Brader et al, 717 Tenth St., Wichita Falls, G. Jennings 17, S 12, HT&B Ry sur, 1102 ft to W and 150 ft to N line. J. J. Jenkins, Harvey-Snyder Bldg., Wichita Falls, E. Hardin 3, O. Farrish sur, 208 ft to N and 290 ft to W line.

Wilbarger County—Gray Petroleum Co., F. & M. Bank Bldg., Fort Worth, S. A. Castlebury 2, S 83, B 14, H&TC Ry sur, 150 ft to N and 486 ft to E line. Milham Corp., Travis Bldg., San Antonio, W. T. Waggoner 14-L, S 42, B 4, H&TC Ry sur, 300 ft W No. 2. Phillips Petroleum Co., Bartlesville, Okla., W. T. Waggoner 10, S 43, B 4, H&TC Ry sur, 220 ft to S and W lines; 11, 439 ft E No. 10; 12, 220 ft to S and E lines; W. T. Waggoner 7, S 43, B 4, H&TC Ry sur, 439 ft W No. 3; 8, 220 ft to S and W lines; 9, 439 ft W No. 5; W. T. Waggoner 1, S 46, B 4, H&TC Ry sur, 220 ft to S and W lines; 2, 509 ft to E and 220 ft to S line; W. T. Waggoner 5, S 46, B 4, H&TC Ry sur, 220 ft to N and E lines; 9, 220 ft to N and W lines. G. C. Wood, Box 378, Wichita Falls, M. Haney 1, B 8, S 18, H&TC Ry sur, 660 ft to N and W lines. Winnipeg Oil Co., Wichita Falls, W. T. Waggoner 1, S 48, B 14, H&TC Ry sur, 150 ft to S and W lines.

Webb County—Cole Petroleum Co., Laredo, Arispe 10-A, S 3, B 5, 155 ft to N and E lines. Crown Central Pet. Corp., Houston, Keene 2-A, B 14, A. de Arriba sur, 340 ft N No. 1.

Young County—Texas Co., Wichita Falls, V. Tidwell 9, J. A. Hopkins sur, 2847 ft to N and 150 ft to E line. M. J. Bashara, Wichita Falls, Morgan 2, 3409 TE&L sur, 400 ft NE No. 1. Magnolia Petroleum Co., Dallas, C. Little 1, I. Holman sur, 150 ft to N and E lines. T. E. Trunick, Brownfield, H. Hinkle 1, S 320, B D, 2030 ft to E and 507 ft to S line. M. R. Hemphill, Graham, V. Keller 8, 1103 TE&L sur, 734 ft S No. 7.

Zapata County—L. O. Gleason, Box 587, Laredo, Benavides 2, S 9, B 12, 550 ft to N and 660 ft to E line.

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NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

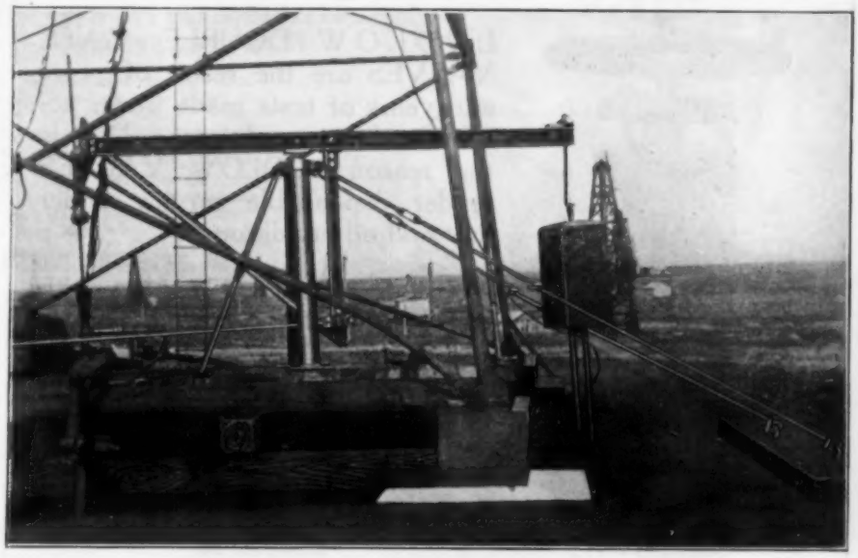
Counter-Balanced Beam Cuts Down Load on Sucker Rod

So as to balance the load at the well through the use of weights, the Durnell counter-balanced pumping beam being manufactured and sold by the Union Machine Company of Bartlesville, Oklahoma, is adaptable for use on wells from shallow depths up to 3800 and 4200 feet.

The counter-balanced feature of the Durnell pumping beam is in the weights which save excessive load on the power and engine and actually does make the weight do the work. Rod line breakage is virtually eliminated with the use of this pumping beam and smaller engines can be used with less horsepower employed. A long stroke with a straight up-and-down slow motion is obtained through the use of this beam.

The accompanying illustration shows the Durnell counter-balanced pumping beam set up on the derrick floor. The beam also can be set on concrete foundations as is done by producers in the majority of installations. It is made in 10-foot, 12-foot and 16-foot beams.

Further information may be obtained by communicating with the manufacturers direct.



Durnell Counter-Balanced Beam Pumping Beam installed

Automatic Cat Head Is Time and Money Saver

After making tests extending over several months, MacClatchie Manufacturing Company of Compton, California, has announced the New Automatic Cat Head, a device which the manufacturers claim is not only safer than their old style cat head but results in a saving of labor, time and money.

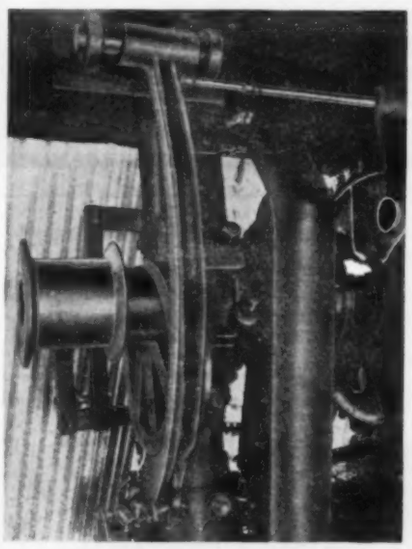
As the accompanying illustration shows, simplicity and safety are the main features embodied in the cat head's design. There is an absence of clutches, dogs, gears and springs, which means simplicity and low upkeep cost, according to MacClatchie engineers.

When used for "breaking out," the pull is obtained by application of the force of an eccentric against a drop-arm. The top of this arm is hinged to the head board member of the drawworks while the bottom is allowed to swing in an arc it makes when thrown in contact with the eccentric. In this manner, a steady, uniform pull is exerted on the break-out tongs when the cable is fastened to the tongs at one end and to the lower end of the drop-arm at the other end becomes taut.

Several of the cat heads have been placed on California rigs and made to undergo duration tests as well as temporary strain tests. After remaining on the rigs better than four months, there has been no evidence of appreciable wear, and the catheads have given satisfaction, according to the manufacturers.

Due to the fact that the cat head will pull so far and no further—the length of the pull on the tongs being governed by the distance from the point on the circumference of the eccentric nearest the shaft to the point most remote and the amount of leverage placed on the drop-arm, there is no danger of tongs being pulled off the pipe. Nor is there any danger of a man becoming mangled in the rope travelling around the line shaft nigger head.

Further information concerning the MacClatchie cat head may be obtained from the manufacturers or from their Mid-Continent representative the Elms Specialty Company, 4226 Main Street, Dallas, Texas.



MacClatchie Automatic Cathead

National Powers Described

Pumping powers manufactured by The National Supply Companies are described in a new catalog published by The National Supply Companies, Toledo, Ohio.

National pumping powers are built in three types and a total of five sizes covering every requirement of power-and-jack pumping from a few shallow wells to many deep ones. Pumping depths are limited only by the practicability of jack pumping which is seldom applied to depths greater than 2500 or 3000 feet. For greater depths the horsepower requirements are such that standard pumping rigs and individual engines are generally used.

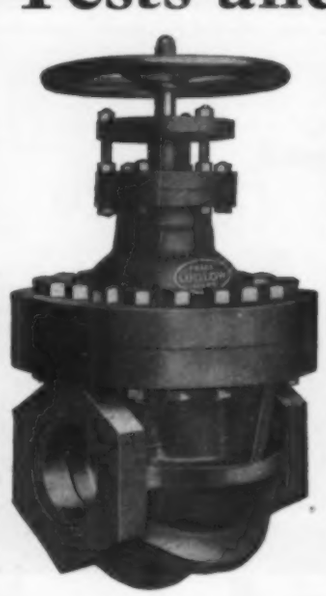
Copies of the catalog will be mailed to any one on request to the company, at Toledo.

"The Oil Industry"

The problems faced and the chances taken in drilling are well known to production men, and those of the refiner, to other refiners; but the oil industry is now so large and the work of its various divisions so specialized that it is hardly possible for one man to keep personally informed of the problems of all.

Yet it is only through knowledge of these problems and the methods by which they are being solved that the individual worker can understand his relationship to his fellow-workers. As producing, refining and marketing centers now extend to every continent he is forced to rely upon the writings of others. In most instances he is prevented by lack of time and training from giving careful study to reports of development in other lines than his

Tests and Experience



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Patents Obtained, Trade Marks, Patent Causes

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Andrews, Streetman, Logue & Mobley 12th fl. Union N. Bk., Houston, Texas

Maurice Hirsch & Ben J. Brown

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own. Thus his acquaintance with other divisions of the industry is limited to what he reads in the daily papers—information which he knows is highly colored.

To this man Ernest R. Lilley offers his new volume called "The Oil Industry." This book is complete and covers all branches of the industry. It includes the most up-to-date information on field methods and explains the application of these methods.

The style of the book commends it to the reader who is eager to gain information about the industry, but who is not intreested in all its technicalities. The book is not too technical and can be read by the man not acquainted with the oil business with good results.

The volume contains twenty-two chapters, as follows: The nature and origin of hydrocarbons; the organization of the industry; exploration; oil lands and leasing—American practice; foreign leases and concessions; drilling; drilling in operations; lease operation; oil fields of the United States and Canada; Mexican and Cuban oil fields; South and Central America; old world fields; transportation and storage; marketing of crude oil; natural gas and gasoline; refining; cracking; blending and compounding; marketing of refined oils; world corporation control; competitive and substitute industries; futures.

Copies of this book may be obtained from The Gulf Publishing Company, P. O. Box 1307, Houston, Texas. Price $4.00.

Tractor Parts Bulletin

The Rock Island Plow Company, Rock Island, Illinois, has just issued a price list of parts for the Rock Island Model 70 Tractor Winch, and also the Heider Model C Tractor with Winch attachment. Copies of this booklet will be mailed on request to the company.

Panhandle Elects Officers

Wichita Falls, Texas.—Roy B. Jones was re-elected president of the Panhandle Refining Company at the annual meeting of directors and stockholders of the company held here April 20. Other officers elected are: Tom Morrisey, Bert J. Shaw, both of Wichita Falls, and Thomas S. Sherman of New York, vice-presidents; M. A. Chambers, treasurer; H. F. Bennett, assistant treasurer; R. C. Stanford, secretary; Guy W. Reed, H. P. Tilden, both of Wichita Falls, and K. K. Ward of New York, assistant secretaries.

V. F. Marsters, geologist, is now connected with the San Juan Land and Oil Company of Albuquerque, New Mexico, in outlining the territory in this section of the state for exploitation in the near future.

New Catalog of Wrenches

Wrench users will find in the 1926 catalog of the Billings and Spencer Company, Hartford, Connecticut, a hand book on wrenches. This company makes every conceivable kind of wrench and can furnish wrenches for any purpose, single or in sets.

The catalog is compiled so as to be of the greatest service to the wrench-using trades and will be found to contain much valuable information in addition to the regular listing of all Billings and Spencer products.

The company will mail copies on request.

New Darling Catalog

Catalog No. 15, recently released by the Darling Valve & Manufacturing Company, Williamsport, Pennsylvania, gives complete and detailed information on Darling gate valves and fire hydrants.

The Darling Company is a pioneer in valve manufacture as well as the other products made by it.

The new catalog is comprehensive in its scope and ought to be in the hands of all users of valves and fire hydrants.

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A. O. Smith Man Promoted

The A. O. Smith Corporation, Milwaukee, manufacturers of Smithsteel Couplings, announce that in the future sales of couplings will be handled by C. J. Hochenauer as sales manager of the coupling division. Mr. Hochenauer, who has previously been located in Dallas, Texas, as district sales manager for this company will in the future make his headquarters in Milwaukee.

Among other recent developments in this company's business is the opening of another office at 1628 Oliver Bldg., Pittsburgh, Pa. This office to be in charge of E. N. Kelly.

A. E. Butts who for several years has been in charge of the Tulsa office will now have charge of operations in the southwest and it is stated that the sales personnel of this office will be increased also.

This revision in policy is made to better serve the increased demand for Smithsteel Couplings, as well as to justify a contemplated sales expansion program in this direction.

George M. Bevier, well known Texas geologist, who served the Atlantic Oil Producing Company for several years, has been placed in charge of the Gulf Coast office of the Pure Oil Company, recently opened in Houston. Bevier has started an extensive study of coastal salt domes prior to the opening of operations in this section. The Houston office has in connection with the geological department a scouting force and leasing branch. The company already has holdings at Liberty and around Boling dome. Offices in Houston are 301-305 Mason Building.

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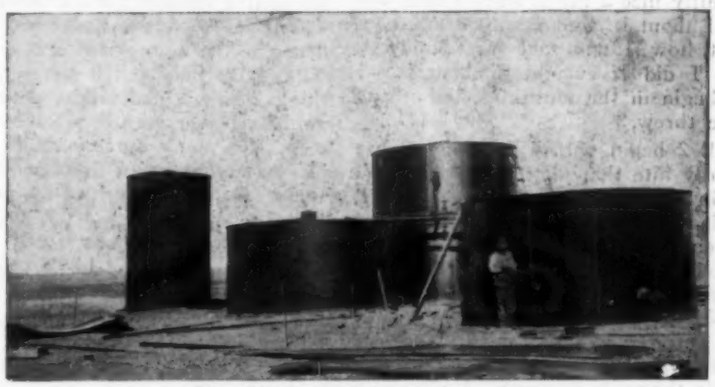

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LETTERS OF Paul Peebles P.S.G.

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mi deer cleopatry

well cleo hunny I gess yu hove a si of releef when you got mi last letter whitch I was away from chicargo & out of the danger of bein mistook for a bootlegger whitch has not pade his union dues & gittin took for a ride, whitch is the common kustom in these hear parts. well I no then that yu will be susprised that I hav cum back hear, but bein as yu aint nevver bin 2 chicargo & do not no all of the peeple whitch I no hear, well I will not expeck yu 2 understand why I cum back, but if yu cood sea how I am tooken care of hear well yu wood understand how it is. I am livin in a swell hotel whitch is about as far from the court house as half way from goose creek to huston, but still & all the saim I am rite in the middel of town, because this is a pretty good size villedge & it is a lot of folks hear I aint met yet. but sum of them whitch I hav met has bin mitty nise 2 me & sinct I cant tell yu all about it, well I will just tell yu about how I cum out last Sundy & what I did & evrything about it. I will begin in the mornin & tell it rite strate threw.

well 2 begin with I cum in so late satterdy nite that mi ingersol had quit runnin & ennyway I did not kare how late it was ennyway only I was 2 tired 2 attend 2 mi satterday nite reglar, so I broke mi rule & put it off till in the mornin whitch was Sundy & I did not hav 2 hurry about gittin up for breckfust because I had 2 invertashuns 2 dinner whitch I was expectin 2 partisipate in thorowly & was kinder reservin for them. well so first off I went in the bathroom whitch is a part of mi room & figgered out the combernashun of how 2 git the watter in & out. evry bath tub I ever see has a difrent combernashun. well rite when I was in the tub the fome rung & then I remembered that a laddy was goin 2 call me up & it shore was embarrisin 2 hav 2 talk 2 her like I was with jest only a towel on, but I did & she did not say nuthin about it so I gess it was alrite with her, only I do not no the eddyket on that point.

well what it was she wanted was 2 tell me that her husband was gone 2 werk and for me 2 cum on ovver about noon (whitch is dinner time in goose creek) & he ort 2 be back bi then & we wood eat & then they wanted 2 take me 2 the feeld museem 2 sea sum geeological spesimens whitch I wood be intrested in. so that was fine.

but the trubbel about yu is that evrytime I start 2 say anything about a laddy yu start rite out 2 misunderstandin bfore I can git threw explanin how it is.

well after we gotten threw eatin we went & gotten on 1 of them tranes whitch runs on a bridge whitch aint got no creek under it & went down 2 this hear feeld museem whitch I find out aint a feeld but a big house about as big as the cort house & and the deepo & the auditorium & a few moar bildins. & inside of it hunny the first thing I saw a ded cirkus with all the animals I ever seen & a lot I dont beleev it is enny sutch standin around in glass cases instid of cages. sum of them in sutch orkward posishuns that I think the spca ort 2 do sumthin about it.

well then in anuther part was sum skool boy stuff about oil whitch is up todate as far as sour lake, whitch is the latest sample they have there. whitch gives me a good ideer about dehydratin gulph coast crude. it is a simple propersishun like puttin the crude in a glass tube & puttin it in a show case in a museem & leev her set for a few yeres and the watter settles out. then it was a hole lot of geeologikal spesimens of all kinds but not mutch about oil geeology on account of they did not no mutch about it when the latest improved refinry ekwipment was the refinry jno. d. rocky feller started in bizness with. they hav got a model of that. but they aint even got a pitcher of the drake well. so I am forsed 2 dismiss the oil part of this museeum with utter disgust & only konsider the animals & stuff like that whitch a lot of peeple takes sevral days & a gide 2 sea but whitch I seen in about a 1 hour & spent most of mi time lookin at the laddy whitch was with me. I aint menshunin no names but if yu was 2 sea her yu wood understand.

well then I had 2 hurry away from there because I had anuther date 2 dinner with sum peeple whitch has fed me bfore, so I noed it was werth mi wile, even if I was not in a habit of bein on time for invertashuns 2 eat.

well when I gotten there I found out they had sum moar peeple 2 whitch was a man & his wife & a little boy, & we all went out 2 a swell hotel rite bi the lake 2 eat, whitch is sum class. well me & this hear little boy was gittin along pretty good 2gether & I was kinder kiddin with him & he sed sumthin about mi nose & I sed 2 him did he think I had a funny fase & his popper sed if I did not look out I wood git the truth in a minnit & then his mother sed yes & I will hav 2 punish him. well then evryboddy whitch was at the tabble pretty neerly choked all at the saim time & the laddy whitch had spoke last got intrested in lookin at the waves in the lake & I did 2. well then it did not nuthin elst happen so we finished up our dinners & then went back 2 the apartment & set around & lissened 2 the radyo & talked tili pretty late & I cum on hoam on a buss whitch is a big automobeel with a lot of seets inside & on top & I got 2 bed alrite.

well hunny I gess I am goin 2 hav 2 leev chicargo agin & go travlin around sum. I hav got a date in huston after about the first of may & 1 in st. loous a few days befoar that & in the meen time I hav got 2 look around sum because they say that travlin kinder brodens a person & I am 2 high for mi wate. whitch this is a pretty good argument why yu ort 2 stick close at hoam, because if yu started travlin & it brodened yu yu woodnot go verry far bfore yu cood not git in the car dores.

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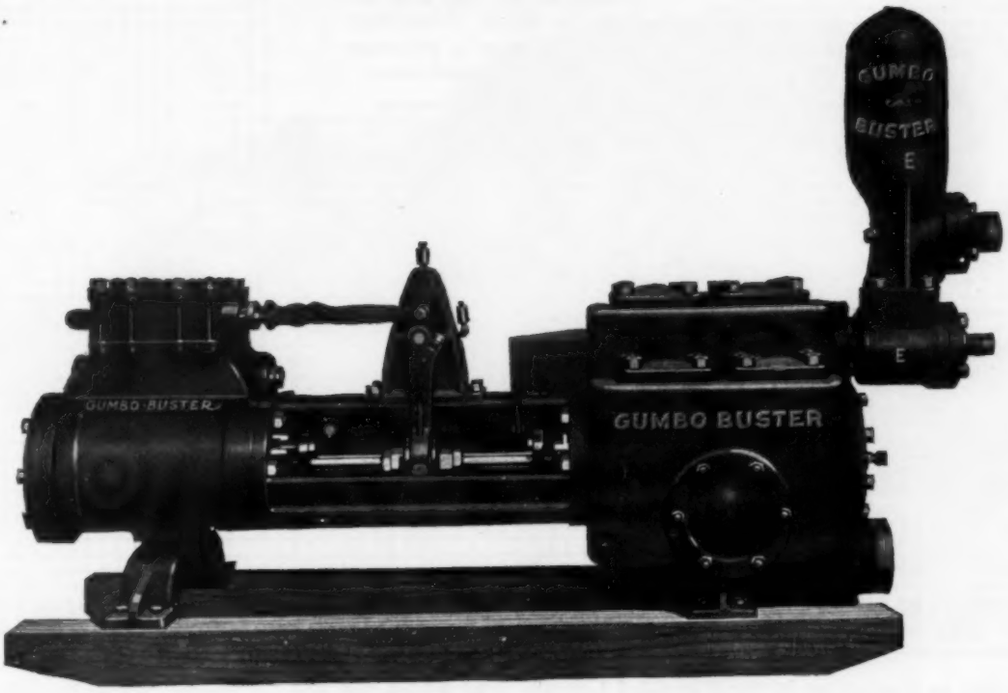

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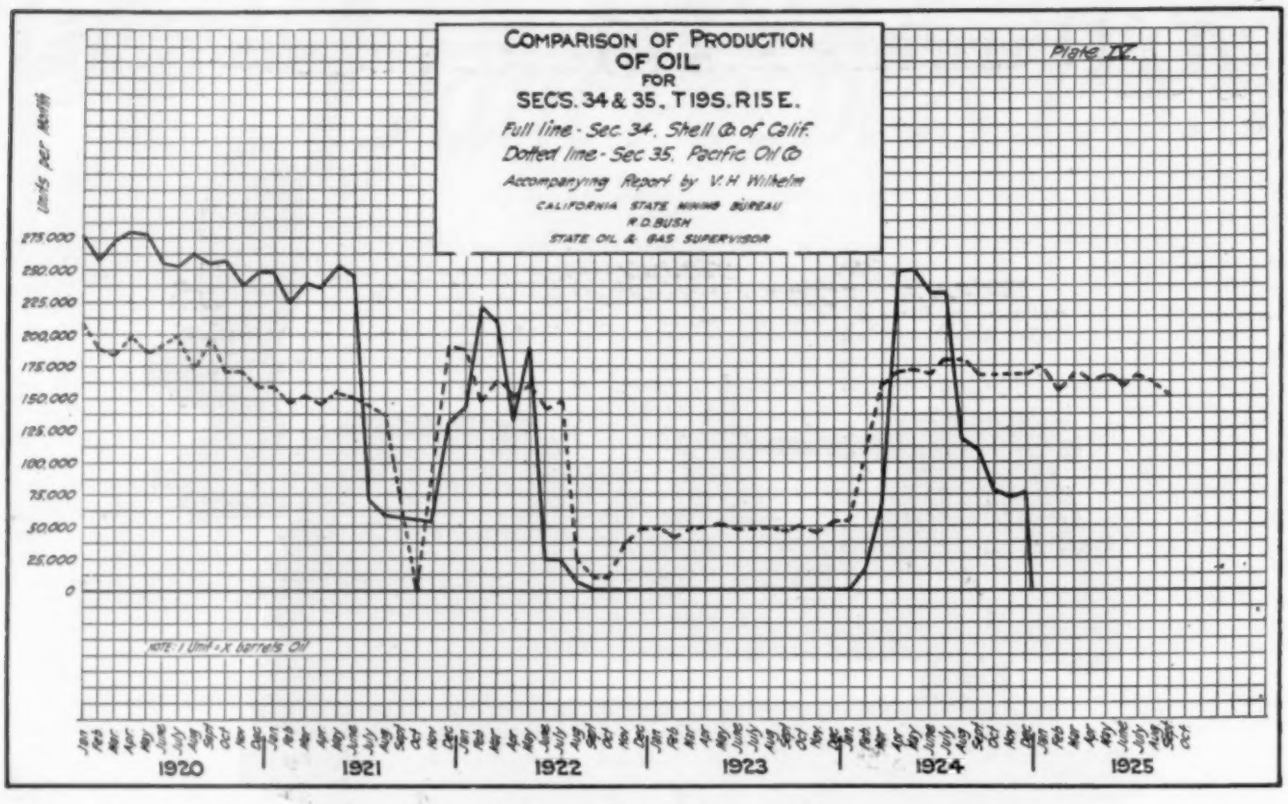


Effect of Closing in Production in the Coalinga Field

(Continued from Page 48)

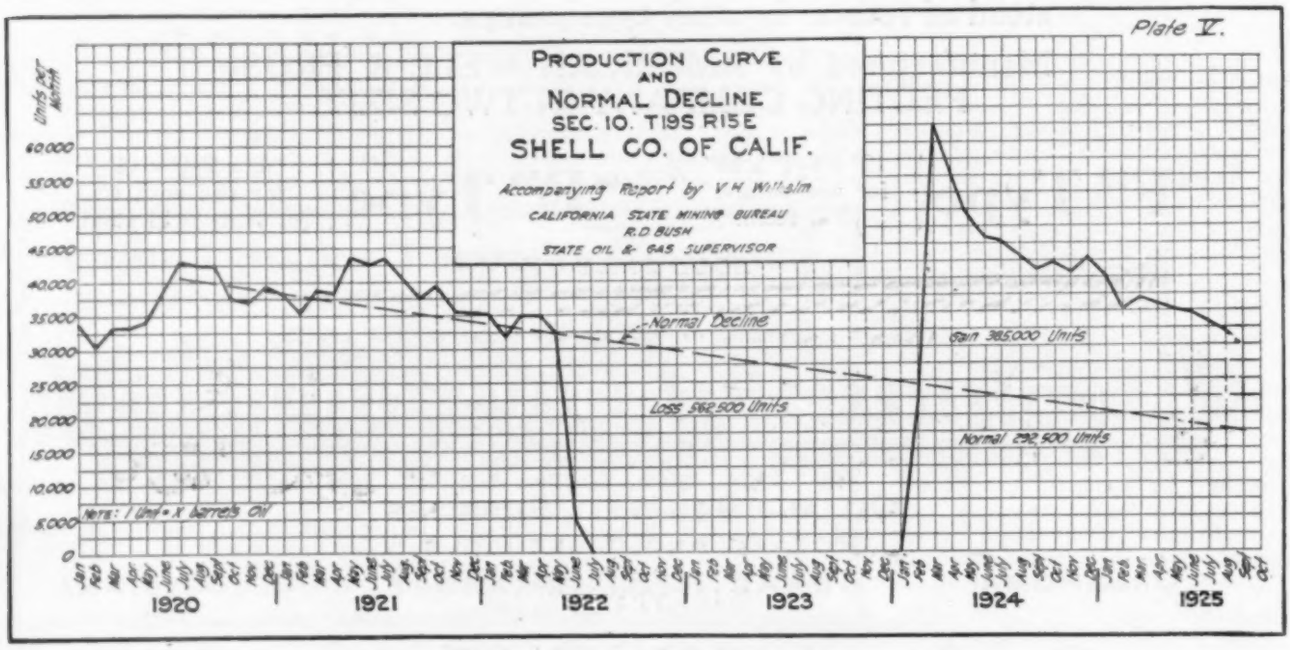
were used throughout the investigation. No new wells were completed during this period of the curves. The decline for both sections was uniform and at about the same rate prior to the first shut-down, which occurred in July, 1921.

During June, 1921, the production of section 26 was reduced to about 82,500 units a month (one unit equals X barrels of oil) by shutting down 16 wells of the 29 producing on June 1, 1921. The wells which continued producing included both the first and second line wells. With section 26 producing in this condition during the ensuing months of July and August, section 35 was operated to capacity. The production of section 35 was not increased; on the contrary, the uniform decline continued, declining from 152,500 units in June, 1921, to 135,000 units in August, 1921.

Thus it appears that section 26 suffered no loss on account of the reduction in the number of pumping wells; and, likewise, that section 35 obtained no part of its excess production from section 26.

During September, 1921, all of section 35 was shut down (see Plate III) owing to labor troubles. The 13 wells on section 26, which had not been shut down in June, 1921, continued to pump throughout the whole time of the shut-down of section 35, which lasted until the middle of November, 1921, a period of about eight weeks. During this period the production of section 26 declined from 78,750 units per month to 73,750 units per month.

The conclusion that wells on section 26 did not drain from section 35 during the strike seems as well found-



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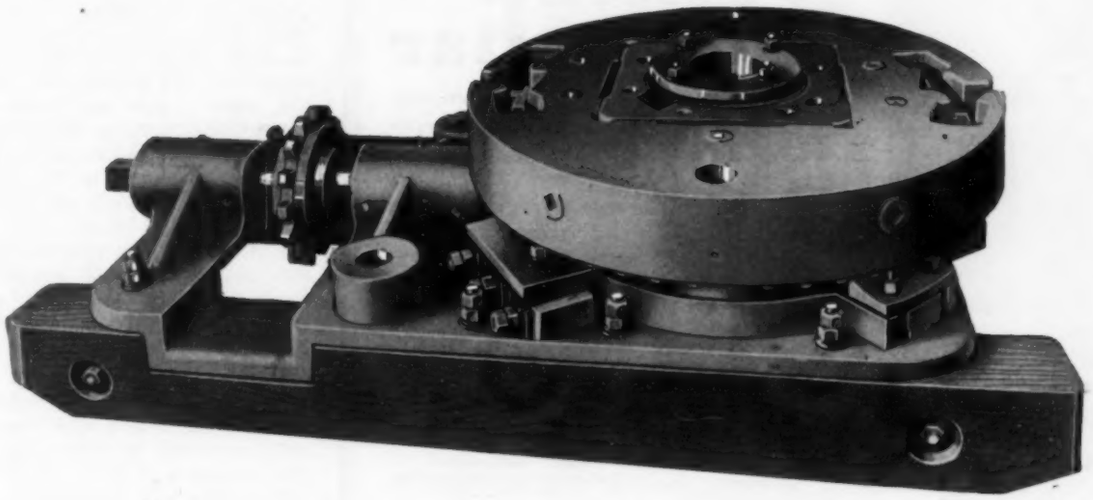

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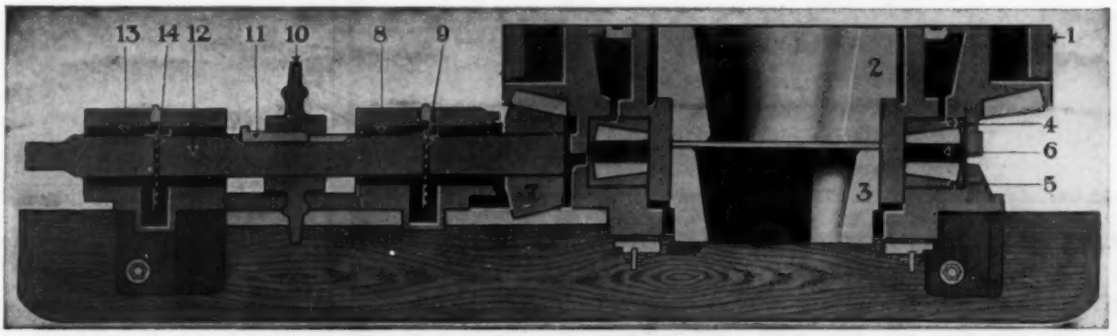

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ed in this case as in the other case cited above.

During November, 1921, at the termination of the strike, all wells on section 35 were operated, and a very large flush production was obtained. If the decline had continued from August, 1921, the beginning of the strike, until the end of November, 1921, without interruption, the production for December, 1921, should not have exceeded 125,000 units per month. After a shut-down of eight weeks the section produced 187,500 units in December, 1921, and in January, 1922, an excess of 62,500 units. The flush production declined sharply after two months to 150,000 units and this production was maintained, with but little further decline, until the section was shut down in August, 1922.

During the eight months following the strike, section 35 produced 1,285,000 units of oil, which was about 265,000 units over the normal production for that period had there been no strike and consequent shut-down. According to the normal decline for the section the lost production during the strike amounted to about 225,000 units. It appears then that for this section not only was the entire loss of 225,000 units recovered in eight months, but an excess of 40,000 units was produced. Nevertheless, the production of section 26 during this period remained unaffected, except that when opened up for short periods in February and May, 1922, the flush production obtained was not as great as on section 35.

By again referring to the curve it will be seen that the production of section 35 declined sharply in February, 1922, when section 26 was operated. It can not be said whether this decline of 37,500 units per month was due to the opening up of section 26 or to the reduction of the accumulated head of oil on section 35. The fact that during the following month (March, 1922) section 35 showed a gain of nearly 17,500 units indicates that the latter was the case.

Finally, during June, 1922, section 26 was again shut down, this time to 35,000 units a month. During June and July, 1922, the production of section 35 remained unchanged, again indicating that no drainage from section to section occurred during the short period of shut-in production.

During July, 1922, both sections were shut down again to less than 50,000 units per month, and in December, 1922, section 26 was entirely shut down. This period lasted until February, 1924, during which section 35 produced steadily at about 50,000 units per month.

In March, 1924, both sections were operated to maximum capacity. Section 35 came back with a large flush production, nearly reaching the peak of 1920. This production of between 150,000 and 187,500 units a month was maintained down to the present time

(October, 1925). The normal production for the period commencing February, 1924, and ending September, 1925, had there been no previous shut-down periods, could hardly have exceeded 2,100,000 units. The actual production for this period, however, was 3,275,000 units, which represents an excess over normal of 1,175,000 units.

The normal production for the 18 months commencing with August, 1922, and ending with January, 1924, would have been about 2,062,500 units. The actual production during this period was 775,000 units. This represents a loss of 1,287,500 units. Granting the approximate correctness of the decline curve used in Plate III, it will be seen that 90 per cent of the lost production during the period of shut-down in 1922 and 1923 was recovered in the twenty months following January, 1924.

In the meantime section 26, although producing to maximum capacity during March and April, 1924, failed to produce the amount of flush production that was obtained on section 35. Unfortunately, it then became necessary to shut down section 26 and since that date only a few of the line wells have produced.

An analysis of the individual well production of section 35 indicates that the inside wells had a larger percentage of flush production than the line wells. Had any of the flush production of section 35 been obtained from the drainage of section 26 it would seem that the wells on section 35 nearest the section 26 line would have produced a higher percentage of the flush production than the inside wells.

The general conclusion to be drawn from these curves is that no considerable loss will be sustained by shutting down one area while the other is operated, provided gas pressure and encroaching edgewater are not factors. The periods permitting comparisons in the cases cited here have been relatively short, but the conclusion to be drawn is that it is reasonably safe to shut down wells of low gas pressure for at least these periods of time with little danger of loss.

Plate IV represents a comparison of the production of sections 34 and 35. The production of section 35 has already been analyzed. The comparison of production of sections 34 and 35 is here shown to support the conclusions arrived at before, namely, that the degree of activity in one section is not reflected in the production of the other.

Plate V represents a production curve for section 10, which was entirely shut down in June, 1922, and not operated again until February, 1924, twenty-one months later. The loss during the shut-down period has been estimated at 562,500 units; 385,000 units of this loss has been regained in the period February, 1924, to September, 1925. It appears that the entire loss of

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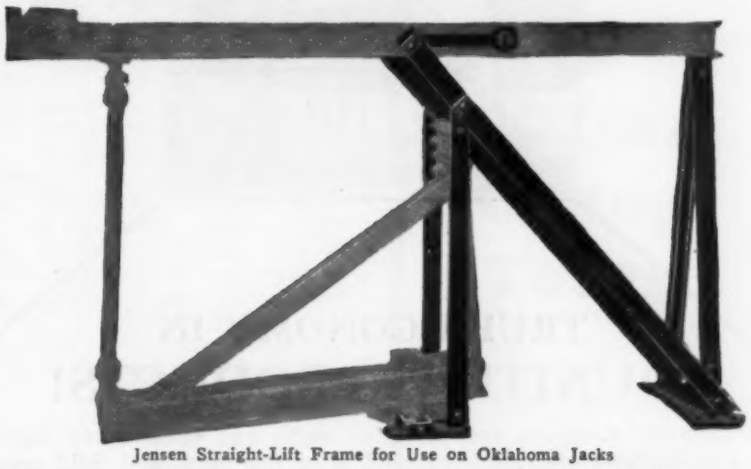

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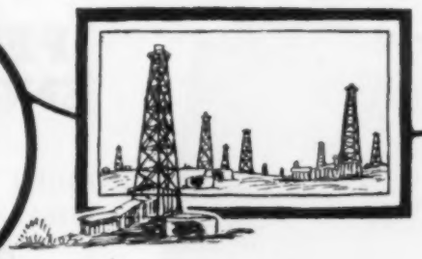

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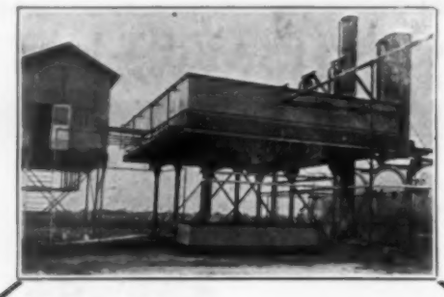

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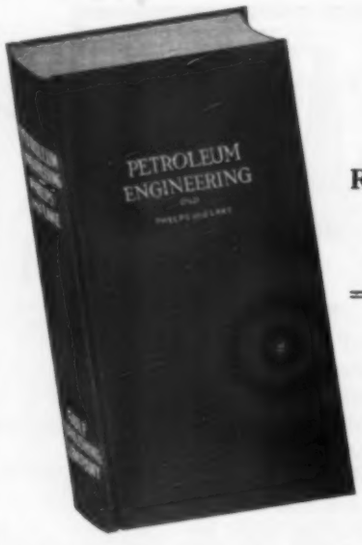

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562,500 units may be recovered before the close of 1926.

Conclusions

An exhaustive analysis of the production reports of certain areas in the Coalinga field after periods of shut-down has resulted in the following conclusions as to the effects of closing in wells:

1. On opening up wells after a considerable period of shut-down, a flush production of oil is obtained which is due to the resaturation of the voids in the sands from which the well is producing. This flush production averages from 30 to 60 per cent above normal production.

2. As a rule the flush production of water is as great as that of the oil, although in many cases wells which normally produced all water, started off, when opened up, producing all oil. This is probably due to the fact that a gravitational separation of the undisturbed fluids in the sands allowed a head of oil to accumulate in the well, forcing the water back into formation.

3. The location of wells on the structure had no effect on the amount of flush production, except where water conditions were serious.

4. Many wells when opened up produced an increased amount of sand, and were kept on production with difficulty.

5. The flush production obtained in edge territory, where water conditions were serious, was very small, and it is concluded that it is inadvisable to shut in wells in edge territory. In some cases it was indicated that there was a readjustment of the edgewater line during the shut-down, the line of encroachment tending to become a straight line. This would benefit certain wells located up-dip from the average line of edgewater.

6. The ultimate recoverable oil from the field has not been decreased by the shutting in of the wells. The life of the field is merely prolonged, although a considerable amount of this deferred production is obtained soon after resumption of pumping.

Handbook on Pipe

"Plain Facts about Casing, Drill Pipe and Tubing," is the title of a booklet recently published by the National Tube Company, Pittsburgh, Penn.

The purpose of the booklet is to furnish in compact, handy form, information for drillers and others who use oil country tubular products. Information is included on the following points: Making up joints, proper depth for setting casing, collapsing strength of casing, tensile strength of joints, tubing, upsetting, threading dies, and information on the manufacture of National Tube Company products.

Copies of the booklet will be mailed upon request to the company.

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New Shallow Field For Clay County, Tennessee

By Special Correspondent

Pittsburgh, Pa.—New flush production was materially increased in the Eastern fields during the week as numerous wells with production above the average were brought in. The discovery of a very interesting pool in the vicinity of Celina, in Clay County, Tenn., by H. Z. Clark and associates, brings to light one of the most productive shallow sand areas anywhere in the country at this time. This is known as the Clark Pool and lies between the Tinsleys' Bottom Field of the same county and the fields of Cumberland County, Kentucky.

The Clark Pool has no outlet for its crude at this time and there is 3200 barrels in tanks. The Paragon Development Company, which has a line about seven miles distant, is figuring on extending it to the new pool and as soon as this is assured there will be a rush of drilling. Every available acre for miles has been taken up.

The two biggest producers found their production in a new sand that was encountered between the Green shale and the formation known as the Pencil Cave. This sand was found in the two wells on the Gray lease and both are reported better than 500 barrels. No. 1 Gray went to a depth of 302 feet and No. 2 to 334 feet.

The new pool is 14 miles from the Tinsleys' Bottom production and approximately seven miles from the Kettle Creek district of Cumberland and Monroe Counties, Kentucky, which is the end of the Paragon pipe line. Four other completions have been made in the Clark Pool which failed to find the new sand and they started at from 25 to 60 barrels. Several miles from the new pool, and near Willow Grove, same county, Carnahan & Horm struck a 150 barrel shallow well below the Pencil Cave, which means the finding of another pool in Clay County, unless the Clark Pool connects with the development at Willow Grove. These finds brings the territory lying between the pool and the Kettle Creek Field across the state line look very inviting and should be thoroughly tested out during the current year.

A big well was drilled along the Cumberland-Adair County line in Kentucky, but caught fire, destroying the outfit. The value of the new well will not be determined for some time. It may have been a large pocket of oil which can not be told as yet. It was estimated as flowing around 2000 barrels rate when the fire caught.

Inclement weather conditions throughout the East has brought about almost a shut down in development work during the past couple of months and now with sunshine the roads should dry up and then activity will be seen in all quarters. Every operator predicts a big year

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SQUEAKS FROM THE BULL WHEEL

The Business Man at Home

Mrs. Fletcher—Did you have a hard day at the office, dear?

Fletcher—In re your question as to my day at the office, will say that business matters were pressing and that I am very tired.

Mrs. Fletcher—Well, dear, dinner is ready.

Fletcher—Your statement in re dinner duly noted, and your suggestion will be acted upon as soon as possible. In spite of all I can do it will be five minutes before I can act upon this, owing to the fact that I have just lighted a cigar. Trusting that this delay will not inconvenience you, and hoping that—

Mrs. Fletcher—Come to dinner at once! It's getting cold.

Fletcher—Your complaint has been placed in my hands by the head of the department. This will be acted upon at once. Feeling sure that you will be pleased—

Mrs. Fletcher—Well, thank heavens! Won't you have some potatoes, dear?

Fletcher—Will go into conference with my appetite at once, and trust that we will arrive at an early decision.

Mrs. Fletcher—Please hurry, dear.

Fletcher—After a conference we are pleased to notify you that we will be highly pleased if this matter re the passing of the potatoes can be pushed through at once. Also note the memorandum re gravy, which should accompany the order for the potatoes. Thanking you for this favor, we remain, J. H. Fletcher.

—Travelers' Beacon.

Built-In Squeals.

Maudie—"What's wrong with the car? It squeaks dreadfully."

Jimmie — "Can't be helped; there's pig iron in the axles."

—Columbia Jester.

A Timely Hint

Handsome Young Boss to Pretty Stenog—"Got anything doing for Sunday evening, Miss Gadfly?"

Stenog (hopefully)—"No, not a thing!"

H. Y. B.—"Then try to be at the office earlier Monday morning, please!"

Among the Missing

A couple newly married were housekeeping on a budget system, to the delight of an old friend. Several months passed and when he called he asked how the budget system was progressing. "Oh, just fine," was the answer, "just look!" He examined a neatly printed budget giving items of meat, milk, marketing, groceries, etc., and every so often the initials "G. O. K." with varying amounts. "That's great. But what, may I ask, are these items marked G. O. K.?" "That," was the answer, "stands for God Only Knows!"

"Developed" Is Right!

A judge's little daughter, who had attended her father's court for the first time, was very much interested in the proceedings. After her return home she told her mother: "Papa made a speech, and several other men made speeches to twelve men who sat all together, and then these twelve men were put in a dark room to be developed."

Passenger (formerly a telephone girl)—Porter, why didn't you call me as I told you?

Sleeping Car Porter—Ah did, lady, Ah sho' did. Ah sade "Seben-thirty, Ma'am," and you sade, "Lin's busy."

—The Pathfinder.

Black: "Nigguh, how much you gittin' for w orkin' here?"

Tan: "Ten dollars per."

Black: "What? Ten dollars per day?"

Tan: "Naw—perhaps."

"Wife: "Why do you suppose plasterers receive $18 a day?"

Husband: "They cover up some of the mistakes the bricklayers make."

Automatic Controller

"What is your car, a five-passenger?"

"Yes, but I can get eight in it if they're well acquainted."

Nurse: "There's a man outside who wants to know if any of the patients have escaped lately."

Doctor: "Why does he ask?"

Nurse: "He says somebody has run off with his wife."

Eggs-Actly

"Waiter! Take this egg away!" roared the elderly diner. "Take it away."

"Yes, sir," said the waiter, as he glanced wistfully at the offending article. "And — what shall I do with it, sir?"

"Do with it?" the outraged customer rose menacingly from his chair. "Do with it?" he bellowed, fiercely. "Why, wring its damn neck."

"Tommy, stop eating with your fingers."

"But, mama, weren't fingers made before forks?"

"Not yours, Tommy."

—Selected.

"Mrs. Jones and Mrs. Smith feel so sorry for each other."

"Why?"

"One has a baby and the other has not."

—Life.

The small boy was directed to soak his feet in salt water to toughen them. He considered the matter thoughtfully, and then remarked to himself:

"It's pretty near time for me to get a lickin'; I guess I'd better sit in it."

—Contributed

Wife: "Didn't I hear the clock strike two as you came in last night?"

Other Half: "You did. It started to strike eleven an' I stopped it so's not to waken you."

—Exchange.

Poor Pay: "I've brought that last pair of trousers to be reseated. You know I sit a lot."

Tailor: "Yes, and perhaps you've brought the bill to be receipted, too. You know I've stood a lot."

—Exchange.

Wife (about to go out): I've put your clean shirt on the clothes horse, darling."

Husband (an inveterate gambler — abstractedly): "Very well, dear—what odds did you get?"

"My wife writes me that she is all unstrung; what shall I do?"

"Send her a wire."

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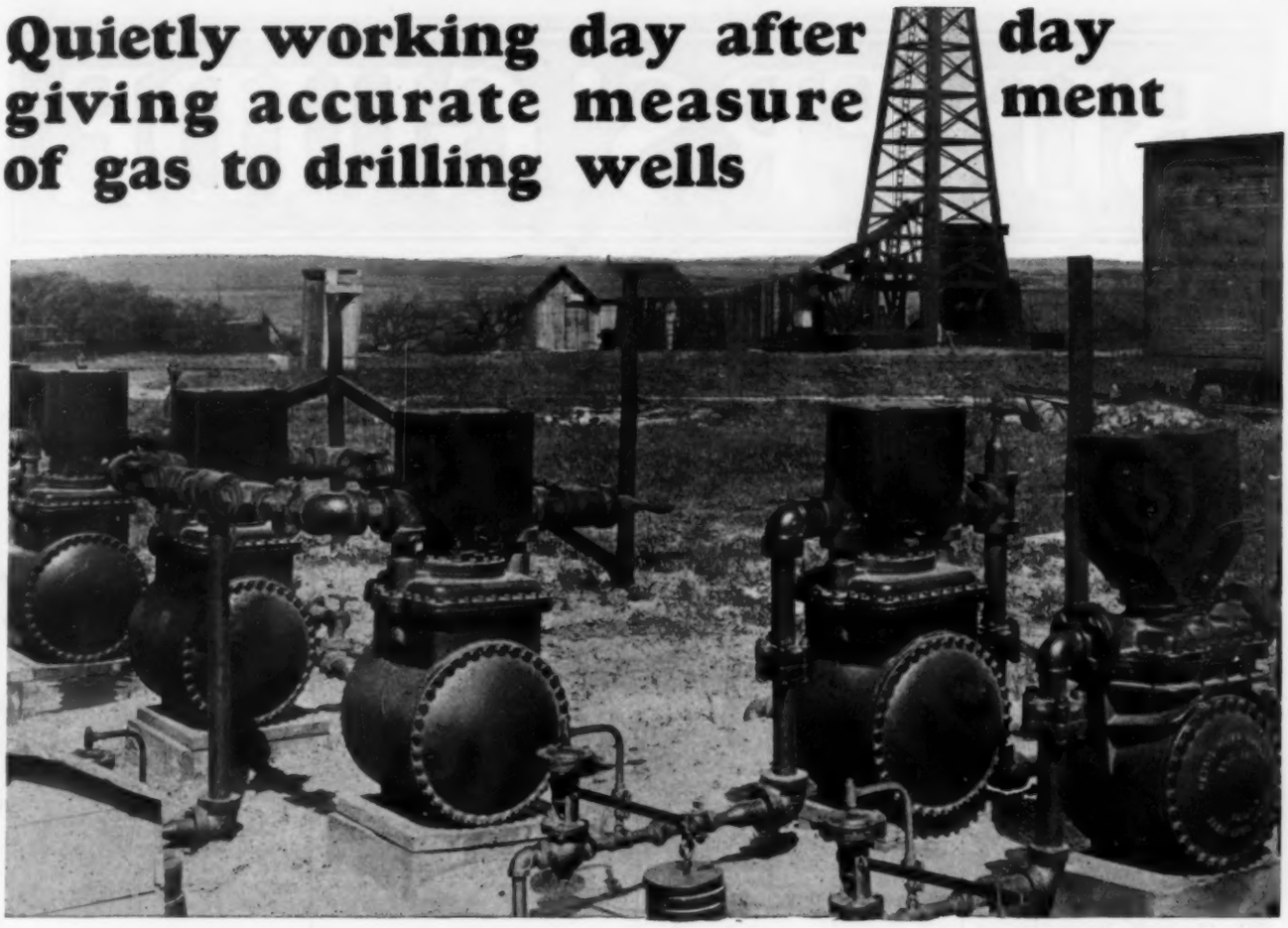

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Continental Supply Company
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.
The National Supply Cos.
Waukesha Motor Company

PORTABLE COMPRESSORS
Sullivan Machinery Co.

PROVERS
Metric Metal Works

PULLEYS
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International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

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Continental Supply Company
Iron King Mfg. Co.

PUMPS
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Continental Supply Co.
D & B Pump & Supply Co.
C. C. Fetty
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Jarecki Manufacturing Co.

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As long as the fluid film is intact, the quality of the lubricant is not so important—but when the fluid film breaks, as it does every time you start and stop a machine—the quality of the lubricant supplied to the bearings is of prime importance, if friction is to be kept from doing serious damage.

After exhaustive tests, scientists in our laboratories developed Humble Oils, which retain the proper viscosity and hold their fluid film at the operating temperatures produced by high speeds. And, in addition, Humble Oils have that all-important quality—the ability to leave a semi-plastic, adsorbed, protective film on the surface of the metal, after the fluid film is broken. This quality in Humble Oils prevents excess abrasion during periods of partial lubrication, which is specially important with bearings, like those of line-shafts, countershafts and machine tools, which are started and stopped frequently and are often subjected to peak loads.

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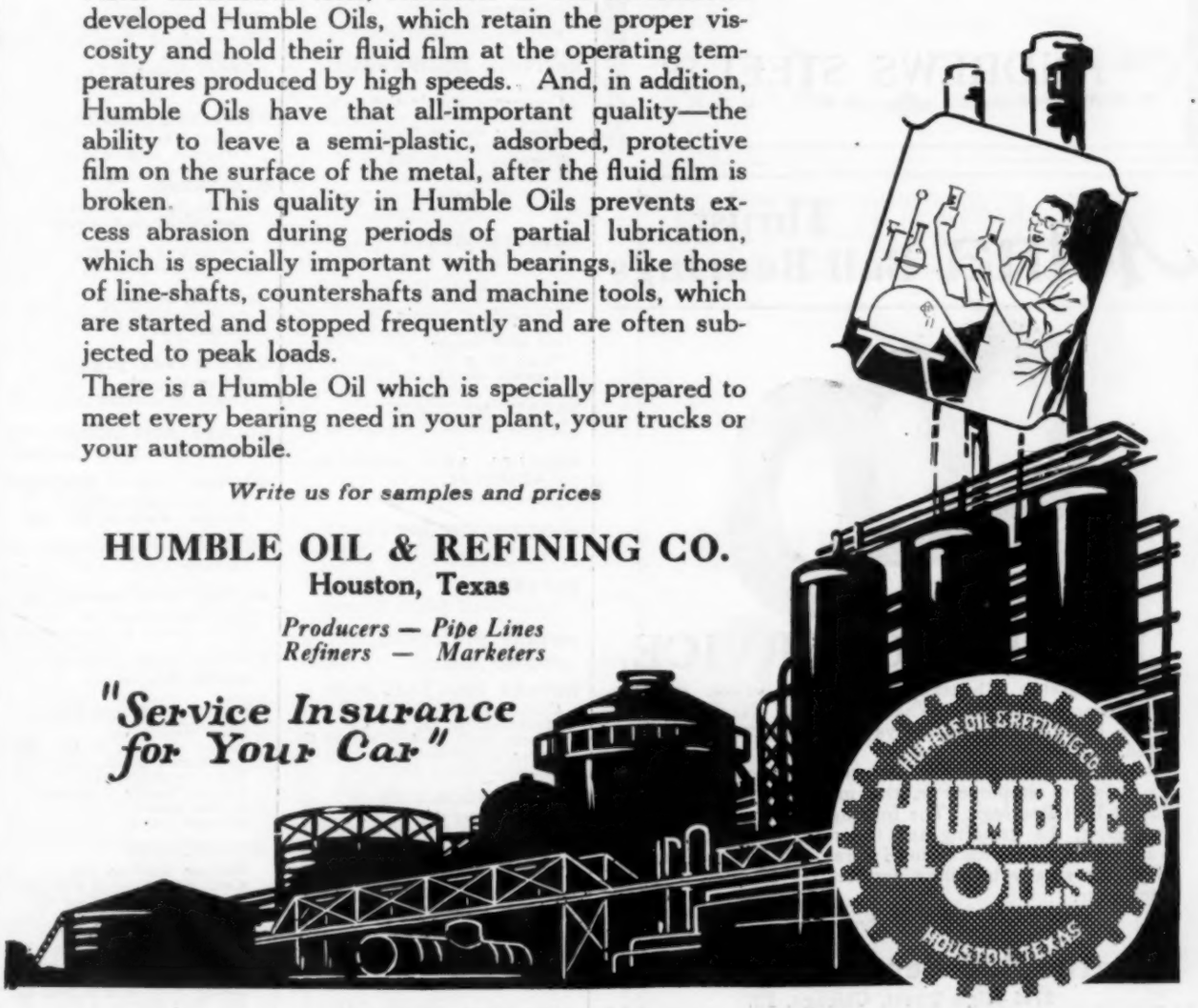

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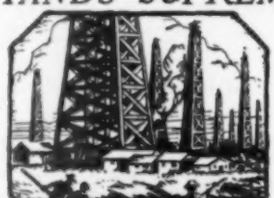

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Southern Engine & Pump Co.
United Iron Works Inc,
Waukesha Motor Co.

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McIntosh & Seymour Corp.

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International Supply Co.
Jarecki Mfg. Co.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Mfg. Co.
Spence Machine Co.

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Westcott & Greis

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Humble Oil & Refining Co.
Magnolia Petroleum Co.
Sinclair Refining Co.
The Texas Co.

RECORDERS
Fort Worth Laboratories

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Continental Supply Company
Petroleum Iron Works Co., The
Republic Supply Co.
Smith Separator Co.
Titusville Iron Works
United Iron Works, Inc.
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Lee C. Moore & Co., Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Co.

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Johns-Manville, Inc.

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Eagle Picher Lead Co.

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ROTARY BIT STEEL
Andrews Steel Co.

ROTARY FISH TAIL BITS
Continental Supply Company
Multi-Cutr Rotary Bit Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.

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Hughes Tool Co.
Reed Roller Bit Co.

ROTARY TOOLS
Federal Supply Company

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Shaffer Specialty Company

SAND PUMPS
Larkin & Co.

SAND REEL SUPPORTS
Shaffer Specialty Co.

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Wilson & Willard Mfg. Co.

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M & V Tank Co.
Smith Separator Co.
Trumble Gas Trap Co.

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Simplex Equipment Co.

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Shaffer Specialty Co.

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Andrews Steel Co.
Central Steel Co.
Ludlum Steel Co.

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Emsco Derrick & Equipment Co.
McIntosh & Seymour Corp.

STEEL CALF WHEELS
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Emsco Derrick & Equipment Co.
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Parkersburg Rig & Reel Co.

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Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

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Petroleum Iron Works Co., The

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Howard Smith Company
Kobe, Inc.
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Central Steel Co.

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SUCKER ROD ROTORS
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Brown Welding & Machine Co.
Continental Supply Company
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Federal Supply Company
Shaffer Specialty Co.
Western Supply Co.

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Oil Well Supply Co.
J. P. Ratigan
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Shaffer Specialty Co.
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The Brownell Co.
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Emsco Steel Products Co.
Hughes Tool Co.
Peden Iron & Steel Company
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Republic Supply Co.

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Brown Welding & Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
Houston Engineers, Inc.
Hughes Tool Co.
International Supply Co.
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Regan Forge & Engineering Co.
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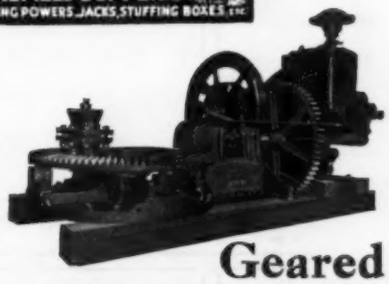

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Magazine Point (Mobile), Ala.

Galveston, Texas
Providence, R. I.
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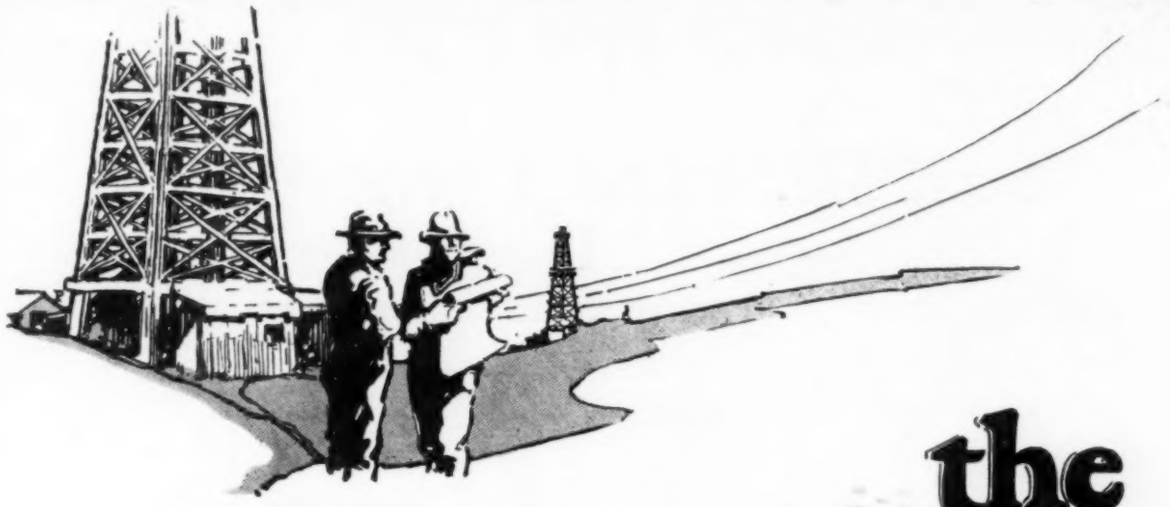
Charleston, S. C.



the Oil & Mining Bureau *desires to help you*

The Bureau was established to be a help to economic drilling. Its wealth of data and experience is of incalculable value. At different stages in drilling a well, you can get advice from the Bureau. Two things govern their recommendations: (a) the showings of adjacent, previous drilling, if any, and, (b) the cores of your own well. Suppose the cores you take are inaccurate—indifferent, and a wrong operation is ordered by reason thereof—one that unintentionally causes expense, worry, and perhaps the total loss of the well. You can't blame the Bureau and soon the real cause appears—poor cores.

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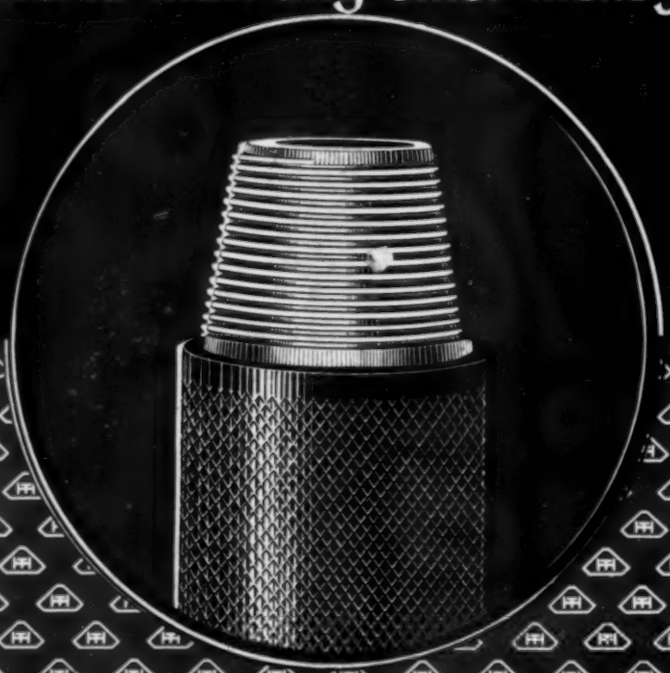
The Majority Rules

Without fear of contradiction we say that there are more

HUGHES TOOL JOINTS

being used throughout the oil fields of the world than any other make joints.



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